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THE PERSONALITY OF
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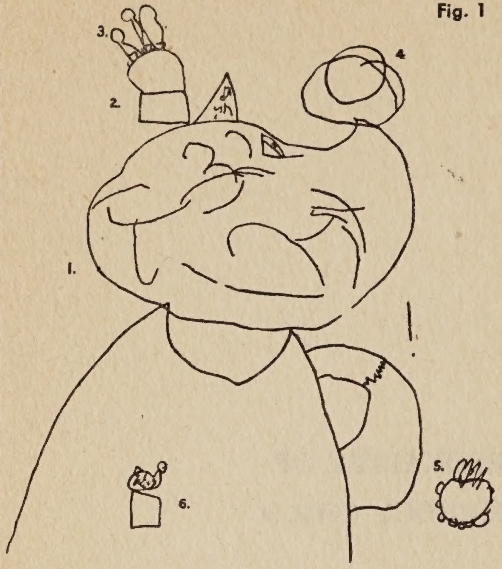

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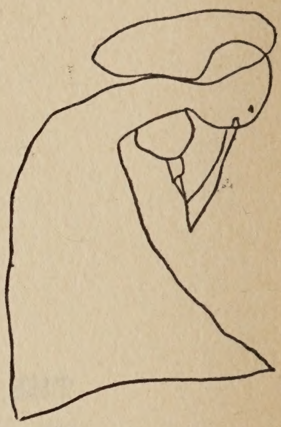

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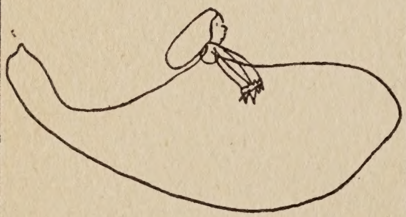

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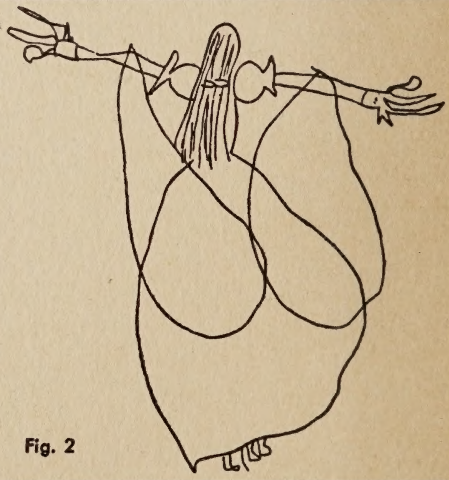

Illustrations to Fairy Tales

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THE PERSONALITY OF
THE PRESCHOOL CHILD

The Child's Search for His Self

By WERNER WOLFF
PROFESSOR OF PSYCHOLOGY
BARD COLLEGE

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To Kate Wolff

FOREWORD

By Mary Fisher Langmuir, Ph.D.

Chairman, Department of Child Study, Vassar College;

President, Child Study Association of America

The Personality of the Preschool Child is an important and creative contribution to the rapidly growing science of child development. Dr. Werner Wolff is one of the first psychologists to consider child behavior and child expression from the point of view of the dynamics of personality during the foundation years in which the self is becoming differentiated. His unifying concepts, first "that all expressions of personality by the young child seem to be varieties on one theme: the child's search for his self" and second, "the recognition of two worlds in which the young child and adult live isolated from each other," are suggestive and stimulating. Even those who disagree with certain of Dr. Wolff's formulations or his interpretations of specific items of behavior will be deeply indebted to him for carrying his important pioneer work on "experimental depth psychology" into the study of child personality.

One point made by Dr. Wolff on a controversial subject seems particularly worthy of mention in view of rather widespread current confusion, especially among educators and parents. It also has important implications for our understanding of children's aggressions and fears. In discussing the fairy tale and "the Integration of Fairy Tales into the Orbit of Experiences" Dr. Wolff states, "We believe that the structure of the fairy tale is of the same kind as are the imaginings of a child who has never heard a fairy tale. Fairy tale and the child's autonomous thinking originate in a similar psychic level." The author presents convincing evidence from the rich and varied data made available to him for study and analysis that "any fantasy of the child, even if derived from stories heard, leads us into the child's personality." In this and many other ways the reader's attention is continually directed to the meaning for the child of his particular symbols or forms of expression.

No one who carefully reads Dr. Wolff's reconstruction of the inner world of childhood and the search for the self can continue to ignore or deprecate what have traditionally been considered the irrational, the illogical, and the destructive (naughty) items of childhood. Each child's spontaneous behavior and individual idioms of expression take on new dignity, and new significance, because of this book.

Finally, Dr. Wolff's emphasis on the need for converging approaches instead of isolated tests is not only scientifically sound but essential if the basic unity of personality, even in childhood, is to be described and understood. Even though much of the work is still in a controversial, pioneer, and experimental stage, Dr. Wolff's *Personality of the Preschool Child* makes an outstanding contribution toward the creation of a "depth psychology of childhood."

M. F. L.

Vassar College
August 15, 1946

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PREFACE

THE present study of the child's personality had its beginnings more than fifteen years ago.(610-614) Observational and experimental studies were made in nursery schools and homes in Germany, Spain, and the United States.

The author's interest in child study was mainly motivated by his concern with the problem of personality. The personality of the adult grows out of the personality of the child, but the further we trace back the origin of personality formation, the darker becomes the field of exploration. Our own remembrances mostly do not reach to the years of our preschool existence. Some scattered situations may spring up in our memory, but they remain isolated facts without inner relationship. The continuity of our existence is suddenly broken up, we do not know what lies behind this gap, but we feel there was another world.

In spite of the detailed investigations of a child's abilities in his years of early growth there did not emerge a picture of the personality of the preschool child. A. Gesell, in his book *The First Five Years of Life,* remarks:(214) *

> It is hoped that the reader will not be too much disappointed if he fails to find in the volume he now holds an exclusive ideology which would explain the hidden forces and motivations of child behavior. We believe that too little is known about the complex transformations of early behavior to warrant an elaborate theoretical structure.

The present author felt that he could not add too much to the brilliant investigations of overt child behavior by investigators such as Gesell, but he felt the urge to attempt an approach to the hidden forces and motivations of child behavior. Searching for some kind of theoretical structure of the personality of the preschool child, the task was to design new experiments and to explore the expressive behavior of children in their spontaneous verbal, graphic, and dramatic expression. From the author's observations there emerged a unifying concept of the viewpoint of the child, in that all expressions of personality by the young child seemed to be variations on one theme: the child's search for his self. The child's imagery, his spoken language, and the language of his behavior appear as a continuous questioning: Who am I? What am I for? The child does not explore the world only in order to gain knowledge, but also to differentiate himself from his environment.

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* P. xiii.

The other unifying concept was the recognition of two worlds in which the young child and the adult live isolated from each other. The transformation of a child into an adult proceeds in his gradual process of growth. The preschool child is at the beginning, the adult at the end of this developmental process. Thus, the young child and the adult have extreme positions; the gap between both worlds becomes bridged when the preschool period has ended. Because of this structural difference between preschool child and adult, the child's thought processes, his emotional world, his social life cannot be evaluated from the standards of the adult, but have to be understood from the child's own culture. Even if expressions of the young child resemble in their appearance corresponding manifestations of the adult, their basic structures are as different from each other as are, for instance, two forms of laughing —laughing in joy and laughing in embarrassment. Thus similar appearances may have different roots, just as dissimilar appearances may have similar roots, as for instance two forms of joy, expressed by laughing and by weeping. These examples are chosen to indicate that neither similarities nor dissimilarities can be inferred from a surface behavior; we need an exploration of the depth of personality.

In an attempt to explore the child's inner personality methods were used by which the child was stimulated to a "projection" of his personality, just as an image is projected upon a screen. The different rays which cause the projection of an image come together in one point that lies in the depth of the apparatus. If we want to discover this hidden point in the psychic apparatus, we have to construct experiments which indicate the directions of each ray; and so as not to be lost in experimentation, our procedure should always have in view the focal point of the rays. The author calls such an approach to the depth of personality by means of experiments "Experimental depth psychology." This term indicates experimental investigation for exploring the depth of personality.

The children discussed in this study were from 3 to 5 years old. The three parts of our investigation—observation, experimentation, and theory—focus upon one main problem: the development of the self.

In this country the author's studies on the personality of preschool children were first carried on at the Sarah Lawrence College Nursery School, Bronxville, N. Y. (1939-40), and he wishes to acknowledge the courtesy of Drs. L. B. Murphy and E. Lerner in making available their research material.

From 1940 to 1943 the author was Research Associate in the Department of Child Study at Vassar College, Poughkeepsie, N. Y., which was carrying on research on the personality development of children under grants from the Josiah Macy Jr. Foundation and the General Education Board. This research group developed special facilities for the study of the preschool child in training recorders of children's verbal responses, observers of children's behavior, and in establishing a filming project to study the child's development of personality. I express my most sincere gratitude to Dr. Mary Fisher Langmuir, director of the research project, to Dr. L. Joseph Stone, who gave me much stimulation with his unique films on children's behavior, and to the many observers and recorders whose material I am kindly permitted to use.*

I wish to thank my students in psychology and child study at Bard College,† who carried out many of my experimental designs, and Mrs. Serena Modigliani, who generously contributed records of her son.

I am grateful for the comparative material obtained from many sources such as the Jewish Education Committee, the Poughkeepsie Day School, the New York Institute for the Education of the Blind, the Lighthouse, New York City, the material on epileptic children furnished by Miss Florentine Hackbush, psychologist with the Bureau of Mental Health in the Commonwealth of Pennsylvania, and the drawings of a neurotic child given by Dr. Miriam Fiedler.

I am indebted to the many authors whose works are referred to. I wish to thank the World Book Company for permission to use Figures 91-95 from Florence Goodenough's *Measurement of Intelligence by Drawings,* and to Harcourt, Brace and Company for Figures 108-111 from *The Psychology of Children's Drawings,* by Helga Eng.

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* The initials V.C. before a record in the present book indicate that the material was collected by the staff of the Vassar College Nursery School, printed by permission.

† The initials B.C. before a record indicate that the material was collected by students of the Department of Psychology, Bard College. The other records of reactions to the experimental situations were taken by the present author himself.

My special thanks go to my wife, Kate Wolff, who with her criticism and most valuable suggestions brought this book into its shape, which became final through corrections proposed by Dr. Dorothy Clifton, Mrs. Paula Mendel, and through the fine editing job of Mr. James Holsaert. I am grateful for their help and for President Harold Gray's careful reading of the proofs.

My deepest thanks are offered to all the little children whose thought and art inspired not only this approach to the preschool child but enriched my view on the problems of human behavior.

Annandale-on-Hudson, N. Y. W. W.

PART I

OBSERVATION

Chapter 1

THE MIND OF CHILD AND ADULT

ASSOCIATION AND PERCEPTION

LAYMEN and child psychologists usually interpret the child's actions and reactions in terms of adult psychology. The child is considered as an undeveloped adult.

Since the child has had infinitely fewer experiences than the adult, his associations, thought patterns, and motivations for actions and reactions are greatly limited. Therefore the first basic difference between child and adult is a quantitative one in the volume and extent of thought material. But any quantitative difference in personality also appears as a qualitative difference. If we say that a person is active or passive, we can also define passivity as an extremely low degree of activity, since a complete absence of activity would mean immobility. But just this extremely low degree makes the qualitative difference of behavior. Each new experience does not constitute a single independent item but becomes integrated into personality, and such an integration effects a qualitative change in all other factors. Each element which forms part of a whole influences the whole. Therefore, the structure of the child is different from that of the adult not only quantitatively, but also qualitatively.

The adult's mind is mostly determined by the experiences of other persons, which he accepts. Our factual knowledge in science, philosophy, historical events, etc., is taken for granted. All our own experiences are checked for their validity in comparison with the experiences of others. If this were not the case, our dream experiences or imagination would be taken as reality. The child's own experiences and his knowledge of the experiences of others are very limited, and he does not check their validity.

Any activity of the mind consists of many associations which are linked with each other. The greater our factual knowledge, the longer are our links of associations, and the more significant becomes every step in our thought. If we turn on an electric light, a thought process about that act would involve associations with reference to the laws of electricity, with industry, etc. If the child does the same thing, he cannot have the same associations as has the adult; thus, he substitutes a necessary association link by supposing a special power in himself that can make light. Hence, the child substitutes by products of his own imagination all association links which in the adult are based upon factual knowledge.

The growth of the adult's network of associations demands an acceptance of a large number of facts without his feeling the necessity of integrating them into a logical thought pattern. For instance, he takes it as a fact that men wear trousers and women skirts; that he has to accept certain governmental regulations, etc. If he were to start asking "Why?" about every item of his life, he would be unable to live. The adult, therefore, limits his questioning only to problems which are essential to his personality. The child, whose orbit of experiences is still limited, asks for the motivation and relationship of all the things he experiences. The child's thought is thus continuously troubled, because he is in a state of continuous search for his self. The adult deals with the innumerable facts of life by several mechanisms of simplification such as selection, repression, and generalization. These mechanisms bring order and hierarchy to the phenomena of life. For the child who has not yet experienced which phenomena are of a greater and lesser importance, all phenomena have equal value. Since he has not yet had enough experiences he cannot see a common denominator for similar things and cannot make generalizations. While the adult uses, as mentioned before, the mechanism of selection and limitation, the child integrates indistinctly all experiences and all knowledge into his world conception. Fairy tales play the same role as everyday experiences.

The adult's thoughts are mostly related to conclusions, to plans, or to a body of knowledge. The thoughts of the child are in a large degree related to projections of moods and of emotions. His thoughts are often converted to a language without words. Since his vocabulary is limited, the child expresses his associations in a language of behavior. He speaks through his body in gestures, motions, and habits. Thumb-sucking and bed-wetting are a language which tells of the child's attempt to escape from psychic tension. For instance, there is not necessarily anything wrong physically with the child if he wets his bed. The starting stimulus is usually a psychological one, indicating the child's difficulties with his environment. It was observed experimentally* that an increase of psychic tension increases organic activities, e.g., the production of water, and decreases the bodily controls. Bed-wetting is due to an overactivity of water production, an underactivity of bodily control, and the attempt to release tension by discharging the disturbing factors and by lessening the control. Thus, abnormal bodily functions and bodily movements largely depend on mental disturbances. But also the normal bodily movements of children are an expression of their thought processes. The infant who cannot talk speaks with bodily movements. Also, in the young child verbal language and bodily language form a greater unity than in the adult.

While the adult's thinking is directed toward one certain goal, the child's thinking appears to be undirected and incoherent. The child attempts to get a solution from the most varied angles. If we analyzed the child's various approaches toward the same goal, we would find that his thought processes are logical and significant, but that an incoherence appears if, for instance, he expresses some parts of thought by means of gestures.

The adult's thinking mostly has the nature of a dialogue; his thinking is stimulated by another person or by an object, a book, etc. The child's thinking has the nature of a monologue; it consists of imaginings, questions, and the like, which do not need an actualization and which are not aimed at a public.

The adult's perception is different from that of the child. The way we perceive things determines our experience of reality. Just as a color-blind person perceives the things which he sees differently from a normal person, so the child perceives things differently from the adult. In order to interpret the child's personality we must have the same perspective as the child. We have to consider, for instance, that the child's small size causes him to focus upon the lower parts of objects or to perceive objects from bottom to top. Just as the child's world differs from that of the adult regarding his visual perception, so it differs in all the other perceptions of his sense organs. The child's very own way of perceiving the outer world causes his own particular way of expressing his inner world.

Even the child's manifestations which have a behavioral aspect similar to that of an adult have structurally another significance. Therefore a behavioristic approach, by describing only the child's behavior, does not reveal the child's structure. The terms with which we describe the adult's actions and reactions have not the same meaning if they describe similar outer manifestations of the child. The child's structure would demand a separate vocabulary in order to describe it properly. As long as such a scientific vocabulary is not established, we have to bear in mind the fact that all our descriptions are only approaches toward an understanding of the child, because it is almost as if the child and the adult live on two different planets.

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* R. Heilig and H. Hoff ("Über hypnotische Beeinflussung der Nierenfunktion," Deutsche Med. Wchnschr. *51:*1615-16, 1923) found that pleasant suggestions were followed by reduced secretions of water, chlorides, and phosphates, whereas unpleasant suggestions were followed by excess secretions of water (diuresis) which were accompanied by a parallel loss in body weight.

THE CHILD'S LOGIC

When the young child seems to make wrong deductions and wrong conclusions, the difference between his thinking and that of the adult does not consist in the "logic of thought processes." Without analyzing the child's thought in its elements and in its origin, but only focusing upon the result of his thought process, one comes to the generalization that the thinking of the young child is illogical. Here appears the danger of an exclusively behavioristic approach in child study, the danger of considering manifestations of the child in the same way as one considers those of an adult, the danger of interpreting results instead of conditioning factors, the danger of observing the appearance instead of the underlying or latent qualities.

The process of thinking in children may appear very logical if we try to find logical conclusions from the level of the child. When the child moves an object from one place to another, as by pushing a ball with his foot, he experiences that he makes objects move, that he has power over objects.

The child speaks to his mother at his side, he speaks to his mother who is in another room and not visible, he speaks to his mother who is in another city, by telephone; the child concludes that his voice penetrates all distances and that distances do not play any role in the relationship of things.

The child, walking with his mother, asks: "Where is our house?" The mother answers: "It is too far, you cannot see it." The child takes an evening walk with his mother. "How far are the stars?" he asks. "They are so far that I can't tell you how far they are," answers the mother. "Are they farther from here than our house?" The mother laughs: "Much, much farther!" The child concludes: Some objects are terribly far and one can see them; other objects are not very far and one cannot see them. There seem to be no rules.

The mother is very pale and looks sick; she goes into her room and comes back, lips and cheeks red, her appearance having completely changed. The child concludes: Persons can transform themselves.

The child builds a house with his blocks; he draws a figure with his hands; he concludes that he can produce something which was not there before. Destroying the house, rubbing out the figure, the child concludes that he can make objects of his creation disappear.

The child, touching the electric light switch, says: I wish that there be light, and there is light. The child lights a match, he opens the water tap; there is fire and there is water. The child concludes that he can make light, fire, water—that he can rule over things.

The child dreams that he is talking with his mother, that he goes to another country and sees the strangest things. He concludes that he can see without opening his eyes, speak without opening his mouth, walk without moving his feet. He concludes that all things can suddenly vanish, that anything can happen.

The child sees that his mother has a ring on one finger; she has a bracelet on one arm. He concludes that people like some of their limbs more than other ones, that people emphasize certain parts of their body. He sees face, arms, hands, and legs of people, but the trunk disappears under the cover of the dress; the child concludes that, if drawing a body, one only has to draw face, arms, and legs and can omit the trunk.

The child comes to a lake; he sees his image reversed; he concludes that man can appear upside down. Just as distances had been proven to be without importance, the position of objects proves to be without importance. Thus the child sometimes reverses the figures in his drawings.

If the mother speaks to the child from another room without being visible to the child, he concludes that that particular sound is mother. If the child sees a person moving far away and finally recognizes that this movement belongs to his mother, he concludes that that movement is mother; a part may stand for the whole. Thus in his drawings certain graphic movements may stand for the mother.

Features, sounds, movements, and certain objects are peculiar to the mother, others are peculiar to other persons; if one were to take her nose away, her eyes away, her voice away, etc., it would not be mother any more. All these things are not just added to the mother: they make the mother. The word "mother" is equally a part of her, and the child's name—e.g., Ruth—is part of herself; the child would not answer if somebody called "Mary." Thus the child concludes: Names are part of a person's structure like his eyes and ears.

The child hears a fairy tale and believes it to be true, word for word. What reason should the child have to doubt these happenings? That a man can be transformed into a bear is certainly not more astonishing than that day is transformed into night, summer into winter, a pale and tired mother into a fresh and beautiful one, and that the child himself, when turning the electric switch, may transform darkness into light. If the fairy tale tells that dead persons become alive again, that ghosts are present everywhere, that there are people who see and hear everything, the child knows by his own experience that in transition from sleep to wakening, he himself saw ghosts in his dreams; seeing across great distances happens when seeing the stars; hearing across great distances happens when using the telephone.

Transformations of animals are known from the transformation of a caterpillar into the butterfly and from the egg into the chicken. Magic boxes are like the radio and other machines. The magic of wishes is experienced if the child sometimes has a wish fulfilled. There are no elements in the fairy tale which are without a correspondence in reality.

The perspective of the child is necessarily very different from ours. Not the table, but the legs of the table are before him; when looking up to a person, the child sees first his legs, then the trunk, and then the face. The child, taught what is right and left, and perhaps instructed preferably to use his right hand, sees that the adults preferably use their left hand, or so it seems to him, as he stands opposite and thinks the adult's left hand is on the same side as his own left hand. Thus adults, not identifying themselves with the child's different viewpoint, trouble him with demands incommensurate with the child's understanding.(462-68)

EGO-CONCEPT AND THOUGHT

What are the differences of thought in child and adult? The structure of children's thinking depends on the fact that the ego-concept of the young child has not yet crystallized; the child loses himself in expressions and impressions. The child may have the feeling of standing when drawing a vertical line, and of lying down when drawing a horizontal line; when drawing a zigzag line he may have the feeling that he himself is walking from one side to the other; when drawing a spiral line he may have the feeling of climbing upwards higher and higher, or in the reverse direction, lower and lower. The ego of the small child, not yet fixed, is externalized like pictures of a dream, and the child observes his own ego projected upon impressions and expressions. Young children prefer to speak of themselves in the third person as of something externalized.

The externalization of the ego evokes the fear of becoming lost. Many children accompany the act of going to sleep with long ceremonies, the repetitious character of which gives them a feeling of a marked pathway so that they do not become lost. Piaget reports a patient's recollection of a childhood ceremony for overcoming anxiety before sleeping:(465) *

> Every evening, from about the age of 6 to 8, I was terrified by the idea of not waking up in the morning. I used to feel my heart beating and would try, by placing my hand on the chest, to feel it wasn't stopping. It was undoubtedly in this way that I started counting to reassure myself. I counted very quickly between each beat and if I could succeed in passing a certain number before a particular beat or in making the beats correspond with even or uneven numbers, etc., I felt reassured. I have forgotten the details, but I can remember the following very clearly. At regular intervals, from the pipes of the radiator in my room would come a sudden, deep, rattling sound, which often used to make me jump. I used to use this as a proof of whether I should die or not. I would count very fast between one rattle and the next, and if I passed a certain number, I was saved. I used the same method to know whether my father, who slept in the next room, was on the point of death or not.

The imaginings of preschool children seem to go in similar directions.

The externalization of the ego also appears in the child's identification with objects, which is a constant source of anxiety to him. Identifying himself with the broken doll, with the cut flower, with the eaten animal, or with the stones trampled, the child feels surrounded by constant dangers, more numerous than those a hero encounters in fairy tales. Adults in general cannot imagine all the strange dangers with which the child reckons. For instance, if a match is burning and becomes smaller and smaller, the child may believe that the match feels this painfully and that a corresponding thing might happen to himself. In the child's imagination, a twisted string feels that it is twisted, and a nail in the wall that it cannot move.

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* P. 136.

In his drawings the child tries to liberate some anxiety by the act of retaliation. The paper is sometimes beaten by strokes, lines are pressed together or entangled, persons and objects are sometimes purposely disfigured. A 5-year-old boy said: "I want to press the lines, I want to hurt them."

Just as the voice, movements, drawings, and dreams are externalizations of personality, so for the child a name is also an externalization of a person or an object. The child's own name acquires a special significance, it becomes loaded with importance. The following record was contributed by the mother of a 3½-year-old boy (B.C.):

MOTHER: "Andrew, finish your spinach."
ANDREW: "Oh, listen, if you always tell me that, I will run away, far away. I will go to a house and I will say, 'I came here today because my mommy wants me to eat too much spinach.' And that lady says to me, 'What's your name?' And I answer, 'Andrew.'—'Oh, if your name is Andrew you can naturally stay.' "

Piaget gives many examples of the child's relationship between name and structure. He reports that a 6½-year-old child said:* "If there weren't any words it would be very awkward, you couldn't make anything. How could things have been made if there hadn't been names for them?" Piaget reports of a girl, 9 years of age:† "Daddy, is there really God?—The father answered that it wasn't very certain, to which the child retorted: There must be, really, because he has a name." The child may conclude: If there is a name, an abstraction of a structure, such a structure really must exist. This implies that a child, creating names, believes that he creates structures. By creating imaginary structures, the child externalizes his ego; in the world he makes, he searches for his self.

SELF-TRAINING FOR SECURITY

The child, experiencing an object with its different attributes as an inseparable unit, concludes that with the destruction of such a unit the object is no longer the same as it was before. Actually, children often do not recognize an object as the same if certain parts of it are changed. Karl Bühler(100) remarks that the child is so highly dependent on his visual impression that minor changes in a familiar object may annul its recognition.

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* 465, p. 62

† 465, p. 67.

The child learns not to become lost in the labyrinth of impressions. He develops skill in recognizing a certain object by forming a photographic inner picture of it. Such a training may lead to an amazing ability for "pictured memory." Children seem to train themselves to recognize the same thing; at the age of some months they begin to throw their ball or doll out of their crib or carriage and wait to get it back. The recognition of the same thing leads to an extreme joy over the successful experiment. The same thing is repeated innumerable times; the object is thrown away and it comes back, so often that the validity of the experimental result can be checked: the return of the same thing, the law of repetition, the establishment of facts.

When the child begins to speak the training by repetitions of the same thing also becomes applied to language. Not only is the same word repeated again and again, but the child also creates words of his own, which have the peculiarity of reduplications. The language of children is full of such reduplications: tick-tick, sh-sh, and all the other phonetic imitations.

When the child is older the training of recognitions is exercised on a higher level. It appears in stereotyped play, in the child's wish to hear a story in exactly the same way, in innumerable repetitions.

The wish for security appears in almost all children in ceremonies which are performed when eating, before sleeping, etc. Such ceremonies—which, if kept alive in adulthood, are a main symptom of neurosis—have for the child as well as for the neurotic the value of a standardized experimental condition for checking the degree of security of inner and outer reality. The example mentioned above (see p. 9) is a demonstration of this phenomenon.

Repetition of the same thing leads to recognition, recognition of the same thing differentiates one thing from another, by the differentiation of unities the child builds up his world, and in the building of his world the child finds a secure base on which he can live. Now we may understand why any counter-effort to destroy the result of such a long experimental procedure may evoke tantrums in a child. A 4-year-old child, pretending to be a "mother cat" (see p. 116) and thus establishing the unity: I—mother cat, had a tantrum if somebody called her by her real name. Any interruption of a coherent situation has the effect of destruction. We call such a breaking of a unity, formed by the child, "incision." And now we may be able to explain why any incision, any disorder in the regular scheme which a child builds up, must have a distressing effect upon the child. Nervousness and neurotic trends may result simply if the environment neglects the child's need of order and repetition. Investigations by Ovsiankina(444) and Zeigarnik(626) revealed that children react much more strongly to unfinished tasks than do adults. The unfinished task, because of the shock it causes, becomes better remembered than a finished task. Out of fear of incision there frequently develops a certain type of reaction pattern which we might call "negation." Such children, fearing possible incisions, deny and reject many things rather than accept them.

IMAGINATION

The child does not have the criteria of experiences which lead him to separate possible from impossible happenings. Jersild (300) * gives the following example of this: "When he [the child] is told that there is a bogey in the closet or that trees will sprout in his stomach if he swallows an apple seed, he may be troubled a long time before he is convinced to the contrary."

Another factor besides the child's lack of experience is his vivid imagery, which leads him to strange ways of thinking. Children appear to have a much greater vividness of images than adults have. Some element of vision is sufficient to evoke associations in the child, and these associations lead to an illusion of objects; a spot on the wall may be seen as a snake, snowflakes as white animals, etc.

The experiments of E. Jaensch(297) demonstrated the high impressionability of children and the vividness of their imagination. Certain children, whom he calls "eidetic" children, are able to reproduce from memory minute details of a picture which they have seen for a short time. Their inner eye sees the picture as if it were perceived with the outer eye, so that they are even able to indicate how many buttons are drawn on the dress of a figure. Jaensch tried to explain this phenomenon in the following way:

> This relationship in processes of perception and imagination may now be easily explained from the indication that both perception and imagination are developing from one root, a still undifferentiated unity which is neither perception nor imagination.

The imagination of children is supported by a factor called "synaesthesia" (combined sensations). We find the phenomenon that a sensation from one sense modality may be combined with the sensation from another modality. For instance, if a child hears a certain tone or tastes a certain flavor, he may have the sensation

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* P. 253.

of a certain color. Even persons and objects may evoke certain colors which need not coincide with the original color. Such synaesthesias are also found in adults, but the adult checks the objective value of these subjective impressions by his experience. Because of the child's vivid imagination, all impressions have a stronger effect upon him than upon an adult. When, for instance, the color of spinach or other dark vegetables evokes in the child an association with defecation products, or tomatoes with blood, the child may acquire a decided disgust for those objects.

FIRST EXPERIENCES

Disagreeable experiences seem to make a stronger impression upon children than agreeable experiences, and the former are more remembered in later life. P. P. Blonsky(79) found with several hundred early memories of adults and 11-year-old children, that memories of pain, punishment, death, and unpleasant situations prevailed. Also in a study of more than seven hundred students, made by K. Gordon,(235) unpleasant memories were found to predominate over the pleasant ones. In an investigation of the first remembrance and its interpretation, made by forty college students of psychology (twenty boys and twenty girls), I observed that they had about four times more unpleasant than pleasant remembrances. The unpleasant remembrances mainly referred to sickness, death, fear of animals, hated food, and the arrival of a baby brother or sister. The following are some examples of first remembrances and their interpretation by the remembering person (B.C.).

I

My first childhood remembrance is that of opening a furnace door which I didn't know to be such, and getting slightly burnt, badly frightened. This is an unpleasant experience; many of my earlier ones deal with something unpleasant or embarrassing. This trend would indicate memory of times when I was unable to cope with the environment or was harmed by it. This would seem to denote an inferiority complex and a desire to remember such situations so that I wouldn't get into a similar one.

II

My first childhood remembrance is drinking milk which I hated very much; it made me sensitive to food and conscious of avoiding displeasure as far as possible.

III

I remember sitting in the mud and making pancakes. This indicates a happy, free childhood without problems. Maybe I am longing for such a time.

Another incident I remember is sucking my thumb. I developed a neurosis a short time after breaking the thumb habit. I began to take a handkerchief with me whenever I went to bed. Once in bed, I would chew the handkerchief until I fell asleep. If I should lose the handkerchief in the bedding or by dropping it on the floor, it would be impossible for me to sleep. I slowly grew out of the habit of chewing the handkerchief, but I still held the handkerchief in my hand. Today, I still possess the neurosis in a slightly altered form in that I must take a handkerchief to bed with me and know where it is located in order to fall asleep easily. Maybe my drive for security is related to that.

IV

The first incident I remember is that I was starting to walk by myself without anybody having taught me. I arrived in the living room where my mother had a party. All were amazed. I connect with this incident the attitude, La voilà, here I am, and a strong drive for independence and originality to do things by myself which nobody taught me.

V

The one thing I recall from my early childhood happened very early one morning while my nurse was taking me out in my perambulator for a stroll. I looked forward to these walks with my nurse because she always managed to make these trips very enjoyable. Having reached my second year I was beginning to detect the difference in people, and to form likes and dislikes towards people. While turning the corner, we were approached by a woman who had not seen me since I was approximately two weeks old. She immediately reached down and patted me on the head, and exclaimed, "My how you have grown! I have not seen you since you were so high," showing the size with her hands. She was one of those oversolicitous persons, in whose presence one feels active discomfort. My mental reaction to this was of utter disgust and immediately I clenched my fist and became very tense. Since my first encounter I have always had this same feeling and reaction. In later years this same type of incident was repeated many times, and I have always had the same reaction as before. Then, my conclusion to this was that over a period of a year I naturally would have grown, and also it seemed to me that they resented the years that had passed. Thus I realized that time seems to pass very quickly as you grow older.*

VI

I can recall an early remembrance as though it had occurred yesterday, one moment that has affected my life many times since then and will, undoubtedly, continue to affect it. I can remember sitting in a room which was swarming with people. I was alone in spite of the fact that I was sitting between my parents. All eyes were focused on my father's younger sister. She had just finished giving a piano recital, and as the applause burst forth from all directions

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* The student added later: "I always have a race with time and seem to live quicker than others."

> I happened to look at my father. His eyes were shining and he had an expression of great joy, an expression I find impossible to retell on paper. Mother turned to me and smiling said: "Daddy is so proud of auntie." From that day to this I have fervently hoped that an action of mine would bring that look back. I can pick out incidents throughout my childhood in which that picture has intervened and caused me to take another path. It has forced me to try many things far above my abilities, and it has made my failures much more disheartening. I am completely sure that I will remember that incident unto my dying day and that it will affect my actions and decisions until then.

THE CHILD'S INABILITY TO GENERALIZE

The process of generalization is very difficult for a child to understand as he begins to learn that he is a single person different from all other persons. Stern(539) reports the following observation of his 3½-year-old daughter:

> When looking at an animal picture book she began to ask if a certain bird laid eggs. Her mother replied: "Yes, all birds lay eggs!"—But this general affirmation had as yet no meaning for her, for she pointed to every other bird with the same question: "Does this one lay eggs, this one too?" Her mother always repeated: "Yes, all birds lay eggs"—but without any results.

This absence of generalization leads to the general difficulty of transfer in learning, that is, how much of what is learned in one situation must be applied to another one. D. R. Major and G. Lindner(389) report of a 4-year-old boy: "When his grandfather asked: 'How many fingers have I got?' he answered: 'I don't know, I can only count my own fingers.' " A child who has once recognized the significance of a certain number is not able to apply this numerical relation if he finds the same number in other objects. The object and its attribute or quality form an inseparable unity for the child. To him, all manifestations are at first organized in the same way as the child himself, and secondly all manifestations are as concrete as his own hand which grasps and his own feet that walk. The concreteness of an object demands that all its parts be united with each other; a bowl ceases to be "concrete" if it is broken, it disappears if its elements are dispersed. For example, a child, with his nurse, finds a snail; the nurse tells him much of the life of snails, so that the experience "snail," animated by the nurse, cannot be separated from her any more; the snail becomes a "nurse-snail," the part-concept cannot be separated from the whole.

In a corresponding way a child is not able to answer a question which is extracted from an extensive situation. O. Schneider gives the following example:(507) * "To the question, how old are you? there results the extensive answer: Hilde is two years old, I am three, Rudi is five years old."

A kiss is not only a kiss, it is a morning kiss, or an evening kiss, or a good-by kiss. Just as primitive people, as Wertheimer† reports, often use different numerals for counting different things—e.g., special numerals when counting eggs, and other numerals when counting pigs—so the child sees object and situation as one inseparable unity. The child considers two different things, such as a "snail" and the "nurse," as one inseparable unity for his experience of a certain situation, because only the close connection of both elements made the experience as such. Just as the child does not consider the eyes, nose, mouth, and ears of a person separately but as parts of a whole, so he does not consider parts of one experience separately.

The logic of the child and his concrete type of thinking make it impossible for him to believe that the words for objects need not have a concrete meaning. Thus the daughter of William Stern asks:(535) "Do nightingales always make *night?*" When, at the age of almost 4, she heard that somebody lived on Garden Street, she asked: "Is this a rose garden or a grass garden street?" William Stern's son, when 4 years of age, remarked: "Ocean is called thus because sometimes, if one sees it, one says, *oh, oh!*" (said with amazement).

If the child hears that tables have legs, a cup an ear, a needle an eye, it is logical that the child develops an animistic world concept. When man and animals have a father and a mother, why should there not exist a "daddy mushroom" and a "mummy mushroom," why should not rivers have parents, and "Hudson" not mean son of Hud, and "Mississippi" Miss Issippi?

If the angels are flying in heaven, then, as 5-year-old Ben says, "They are like airplanes. There are lots of them singing around."

C. A. Probst(479) gives the following examples of children's answers to his questions: "A plumber is one who plumbs—he is one who pulls out plums." "Beans are made by bees."

For the child, words are not only a means for expressing thoughts, but the child may use them as a simple expression of emotions, for expressing joy, boredom, etc. Some word combinations play the role of obscene words, and with "speech sadism" the child may discharge aggression. With the child's tendency for personification and concretization, the words themselves have energy and strength.

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* P. 84.

† Über das Denken der Naturvölker, in: Drei Abhandlungen zur Gestalttheorie, Erlangen, 1925

THE MECHANISM OF CHILDREN'S QUESTIONS

The child's questioning may have the purpose of satisfying his curiosity about objects. Piaget (463) classified children's questions as those demanding causal explanation, justification, and motivation. Psychoanalytic observations suggest that frequently one basic question is hidden in children's questioning, namely, the question of the problems related to their own birth. William Stern pointed out that the questioning of the child has mostly an affective character, being the expression of a disappointment produced by the absence of the desired object. In the present author's opinion, the intellectual motif for the child's questioning is his attempt to explore relationships and to establish rules; the emotional motif is to discharge tensions and to tire out the adult; the social motif is to gain attention and power by testing the adult's knowledge.

M. S. Fisher(185) found that the proportion of questions of children in the nursery school rose with age from about 2 per cent at 18 and 24 months, to 15 per cent at 3 years. E. A. Davis(149) found that boys asked questions at a faster rate than girls; boys asked more for causal explanations, girls more concerning social relationships. Of all the questions, 85 per cent were directed at adults, 15 per cent at children.

THE CHILD'S SUBJECTIVISM

When the present author compares his opinions about the world conception of the child with those of an outstanding authority in child psychology, he is forced to some opposition. Piaget remarks:(465) *

> (1) The child, like the uncultured adult, appears exclusively concerned with things. (2) He is indifferent to the life of thought (3) and originality of individual points of view escapes him. (4) His earliest interests, his first games, his drawings are all concerned solely with the imitation of what is. (5) In short, the child's thought has every appearance of being exclusively realistic.†

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* P. 33.

† Numbering made by the present author.

The present author does not agree with this view.

(1) and (2): There is sufficient indication that the child is more concerned with the life of thought than with objects. For children things are mere receptacles for projections of their thoughts. A piece of wood or a doll or a bundle of grass or a stone might equally represent a "baby," upon which the child projects his "thoughts." When drawing such a baby, it is completely unimportant to the child how much the graphically projected thought resembles the thing concerned. Thus in many instances the adult does not recognize the features of the object represented by a drawing, but merely sees a bundle of lines which actually express merely associations related to this object.

(3): Children's preference for fairy tales and strange happenings, and their own fanciful inventions, are most characteristic of the "originality of individual points of view."

(4): The child, selecting objects of preference and of representation by drawings or gestures, represents what the object *means* to him; because of his projections he is not even able to imitate objects as they are.

(5): The child, absorbed by the development of his personality, is not able to make an objective approach to reality and thus sees all phenomena as a manifestation of emotions and of energies which dominate him. As the individuality of the young child has not yet crystallized, outer and inner world are confounded with each other into *one* organism. The child considers manifestations of objects as his own and projects his own manifestations upon these objects. Thus all objects lose their realistic shape and become symbols of the expression of the child's personality. Children's drawings show their symbolic approach and their neglect of realistic features. Thus we may reverse Piaget's statement and say that the child's thought has every appearance of being exclusively unrealistic.

DIRECTED AND UNDIRECTED THOUGHT

The young child, lacking the organizing factor of his self, has not yet learned to organize the material of perception or expression.

He thinks in chains of associations. He progresses from *a* to *b* to *c* to *d*, but when he has reached *d*, *a* is already forgotten. The association principle of the adult, however, is determined with respect to a goal which brings all elements into a necessary connection with each other. The volatile or very subjective connection of elements in the child's thought seems to be the reason for the child's short memory.

One distinguishes two structurally different ways of thinking: the directed and the undirected thought. The Swiss psychiatrist Bleuler called the undirected thought "autistic thought." The directed thought tends to be objective; it is adapted to reality, pursuing a definite aim of the thinker. Autistic thought tends to be subjective; it is not adapted to reality, but creates an imaginary world; it is frequently incommunicable by means of language, consisting mainly of images and symbols. The chief characteristic of the child's thought is its subjectivity; the thought process is not yet standardized; the child has at hand associations which the adult keeps in his unconscious, and the child omits associations which the adult manifests in his thought. The difference between the thought of adult and of child is the different application of thought material, and this difference originates in the fact that the child has not yet developed criteria of that which is possible and that which is not, criteria to distinguish between reality and imagination. Thought patterns in folklore frequently correspond to the thinking of children, and some of this material has been used for nursery rhymes. They appear incomprehensible, because links of associations are omitted. We give the following example:*

Hey diddle diddle, the cat and the fiddle,
The cow jumped over the moon—
The little dog laughed to see such sport,
And the dish ran away with the spoon.

This nursery rhyme was originally a satire about Elizabeth, Queen of England. "Hey diddle diddle" symbolized the gaiety at the court of Whitehall during the reign of Elizabeth. The queen, called by the folk "the cat," was so fond of dancing to the music of fiddles that some hostelries were called "Cat and Fiddle Inn." The queen was not only known as a "false" cat, but she was also called a "cow," because of her awkward gait and her agricultural interests. The "moon," over which the cow jumped, was her beautiful enemy, Mary Stuart, and the "laughing little dog" was the Earl of Leicester, who followed his mistress like a dog and laughed about the "sport," by which was meant "the contemptuous manner in which Elizabeth flouted the dignitaries of Parliament and the Cabinet." "Dish and spoon" were nicknames of a loving couple who served the plates at the court dinners. The queen, not desiring affection at her court, sent the newly married couple to the Tower, where after seven years they were beheaded.

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* Communicated by Edna S. Sollars: "The Queen as Cat." Coronet, May 1937, p. 173.

The nursery rhyme with its apparently senseless elements, which seem to be connected with each other in a completely illogical way, has a very definite meaning which is logically expressed if we re-establish the omitted links.

True, the world concept of the child and that of the adult are very different, but this difference is not that between logic and non-logic. Both concepts are based on experience and deduction, but the adult has a greater amount of experience from which to make his deductions, he has more links of associations which lead him to certain conclusions. The world concept of the adult is different from that of the child because of the extent of its associations which determine the structure of thinking. In dreams the adult regresses to the child's type of thinking, in omitting links of associations, which results in another organization of mental material.

THE PROCESS OF CONDENSATION IN CHILDREN'S THOUGHT

The child learns that the same word means different things which have something in common. Fly, and cow, and fish mean "animal." The flame of the match, the shining sun and the moon, lightning, and the light of an electric bulb mean "light." If the child conceives a common thing in different aspects he compresses them into one word. This is especially the case if the child assigns an object like the snail to the nurse who explained the structure of the snail (see p. 15). A condensation of verbal images may appear due to the child's unifying perception. Kathleen puts a saucepan on her head, and Emily exclaims: "You look like a hat-preacher!" The child does not see the preacher as a man who wears a hat: she perceives the hat as an integrated part of the person, thus seeing a unity instead of attributes and parts.

The limitations of the young child's vocabulary lead to the original effort to express as much as possible by one word. This phenomenon is also found in old languages and even in modern language. J. C. Fenton(180) * gives the following example: "Thus the single word 'up' in my baby's usage might mean at various times, 'Please take me on your lap, give me the book that is on the table, that tree is tall, the moon is up in the sky,' and a host of other things according to the needs of the occasion." C. and W. Stern(535) report of one of their own children (age 2 years and 3 months): "La la:

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* P. 135.

definition—Singing, music, soldiers, all noises, also unmusical ones, tapping, or being scolded." Sully(547) deduces that the child's generalization derives from "underdeveloped processes of classification," but also partly from the lack of ability to differentiate. Meumann(412) says that children constantly generalize the words they first acquire, in such a sense that they classify under the same meaning a gradually growing circle of things.

Deviating from this viewpoint are the ideas of the young Wundt. To him, the first concepts which are formed by the language are not "general" concepts but "embracing" concepts. A general concept originates in a summation of general characteristics which are found in a great number of single concepts. But a concept is only embracing as long as it is not yet analyzed.

E. Cassirer(123) emphasises that the language of the child is rich in "teleological unities of significance," while our concepts follow a pattern of separation and classification.

We experience the condensation of several ideas into one image in the language of the dream. For the child the language pattern used in dream and in waking state is not yet differentiated. The condensation of different ideas into one concept is a result of the general unified reaction of the child. Kurt Lewin showed in pictures(365) that the infant tries to reach an object with his whole body, using both hands and both feet to approach the object. Later the child would grasp with both hands only and finally with one hand.

The process of differentiation during the child's development dissolves the unified response. However, traces of the tendency for unification appear for a longer time in children's behavior. Psychoanalysts have observed that children like to combine into one act various attractive activities. S. Ferenczy(182) states that children like to combine the pleasure of eating with their bowel movement. As early as in 1882 Lindner(389) drew attention to the observation that the infant likes to combine sucking with the rubbing or pulling of different parts of the skin, of the fingers, and also of the genitals.

The child's unification of different significances derives also from his experience. He experiences that each phenomenon has many attributes: fire warms, but it also gives light and it also destroys. Water wets, it also makes one cold, and it also takes off the dirt. The child observes in himself multiple manifestations which are bound together in his one body. Observing these continuous experiences, the child's whole perception and whole expression tend to perceive and to express different things as one thing. In this the structure of the child is very similar to that of primitive peoples. R. Thurnwald remarks of the Melanesians:*

> Concerning the word ciki (drop) they not only think of the falling water-drop but also of the spot it is causing, of the noise of dropping, of the regular intervals between the falling of the drops, and finally, also of the sudden and unexpected dropping.

The mechanism of condensation causing the rebus-like way of expression makes it very difficult for the adult to understand the world view of the child, because one of the main features in the development toward maturity is the process of isolation, isolating the different attributes of an object, specializing our organs of perception, and individualizing our forms of expression. For the child's symbolic way of living, however, it holds true that it is not impressed by *one* manifestation of a phenomenon, but that each phenomenon has many aspects for the child. In a corresponding way, a child's representation is not an expression of one thought or of one wish or one fear, but of a complex of thoughts, wishes, and fears.

Freud, studying the main factors in the formation of dream images and of day dreaming, found two main factors which he called "condensation" and "transference." Condensation means that several disparate elements are fused into one image. Transference means that qualities which belong to one object are transferred to another one. These factors also determine the thought structure of the child. However, analyzing which elements are chosen for such a condensation and transference, it was found that these processes follow logical principles. For instance, a child may imagine a person with a big nose, white hair, wearing a red necktie. An analysis reveals that the child suffered especially from three persons: from his uncle, who had a big nose, from his grandmother with white hair, and from the neighbor who prefers to wear a red necktie. The same holds for the mechanism of transference when the child is aggressive to a person only because he has some resemblance to another person he dislikes.

CONCEPT FORMATION IN THE THINKING OF THE YOUNG CHILD

One characteristic is typical of thought in young children, namely, the element of grotesqueness and of surprise.†

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* Ethnopsychologische Studien an Südseevölkern. Ztschr. f. angew. Psychol., 1913, Beiheft.

† Carroll's *Alice in Wonderland,* e.g., is based upon this principle.

Stern(539) * gives such an example of his little boy, who made a story with the following elements: "The fire-brigade man fell on a rosebush without thorns and yet got pricked. . . . Robbers came and quietly put a lamp on the ceiling and lit it and then made it all dark again and *not* stolen anything."

Children's thinking, like all activities of children, is dependent on a rhythm of expression. Rhythm is one of the basic manifestations to which the infant is susceptible, as it appears in the fondness of the infant for being rocked and for the rhythm of cradle songs. Speech and thought of children are rhythmically organized in a characteristic way, and, as we shall discuss in another connection, rhythm and symmetry are characteristic of children's expression.

Poems of children are expressions of the child's conflict with reality; these fantasies seem to have the same structure as the so-called "surrealistic" manifestations of modern artists.

Children's thinking, as well as their acting and playing, is similar to their dream activity. Just as the child in his dream thinks, speaks, and acts only for himself, without having an audience or observer, so his activities in daily life have a monologous character. If the young child seeks company he uses his friends as actors for his play, and the friends play their own play, everyone in a monologous way. From such an observation Piaget came to the conclusion that the child's language and thought is "egocentric." D. McCarthy(406) found, contrary to Piaget's results, that few egocentric responses appeared at any age level, never more than 4 per cent. E. C. Johnson and C. C. Josey(308) found that children are "socially minded" rather than egocentric.

The mistake of all these authors is to equalize the child's monologous expression with egocentricity, an interpretation which is due to a frequent misunderstanding in child study, that is, the application of the same terms to the child's structure which one uses in explaining adults' behavior. If an adult thinks in a monologous way we may term this egocentric, since the adult has already experienced social relationships and has established his self by the acknowledgment of other selves besides his own. When, however, the child thinks in a monologous way he thinks out loud, and probably not much more frequently than the adult thinks silently.

M. E. Smith(528) found that monologue decreased continuously in the preschool age. As previously remarked, it seems to the present author that the term "egocentricity" cannot even be applied to the child's structure because of the fact that the child has not yet centered his self. On the other hand, the child searching for his self is more interested than the adult in discovering relationships which lead him along the way of establishing his own personality. The supposition of the so-called egocentric reactions is based upon an assumption that the older child or the adult is more interested in other objects than in himself. Such a statement is a matter of interpretation, because all actions we perform can never be detached from certain references to our selves.

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* P. 348.

The difference between the thinking of the young child and that of the adult is not a logical but a grammatical one. If the child utters a sentence in which apparently heterogeneous elements are combined, a closer analysis would reveal that these heterogeneous elements have a common denominator by which they are linked up together in a logical way. What makes the child's sentence appear illogical is his neglect of conjunctions, his omission of intervals, "lack of punctuation" in his thought and speech.

We give in the following a record of Alice, a 4-year-old girl.(542) *

> One time there lived a old mother possum. She was a very sweet possum, but she did very silly dances. Silly. (Her child said:) "Don't be so glantery. Jack in the box for nothing!"—"Oh, nonsense!" said the mother. (The child replied: "Your dance is as silly as your stories are.) Don't be telling me so many nonsense stories. That's not fair. There's nothing true about that sooooo don't be so glee." (The mother:) "I'm not full of glue, it's just appearing to." (The child: "If you do nonsense, I sing nonsense.) Thumbly, thumbly, glantering damously. Clitter, clatter, sing the clitter clatter and the violins some time over. (Don't tell me I should be sensible.) How many times would I say a-b-c? Two times. (But I don't say any more what I think, I pretend.) Pretend—pretend for two times an hour." (Goes off into song:) Ketended—sing the songs of meener, with the doors of the clitter and the marches too in the dark of the pleasantly opter!

If one hears the child's talk without those links which we put in parentheses and which can only be reconstructed if the whole talk is recorded, one has the impression of a chaotic mixture of associations. Every logical connection of the elements seems to be missing; but, as we demonstrated, only some connecting links and the punctuation are missing. The same principle governs the child's drawings, which she accompanies with a similar scramble of words. Children's drawings are pictured associations, and their meaning, too, must be reconstructed. For instance, the child draws a picture of a dog playing with a ball (Fig. 1). First basic association: It

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* P. 45.

would be funny to see the dog bouncing the ball on his nose (2). Second basic association: This is a mother dog, she has a baby. The mother dog taught the baby to bounce the ball on his nose. The child draws the baby (6). Third basic association: The ball is a birthday gift. If one has a birthday mother bakes a birthday cake in the oven. The child draws the oven (5) and the birthday cake (3).

The three basic associations are now stimuli for fantasies. The first basic association evokes the idea of funny stories. The second basic association evokes fantasies about a dog-mother and her baby. The child projects on this fantasy her own experiences, when she would like to do something which she is not allowed to do. The adults consider the child's wishes as nonsense, like bouncing a ball on one's nose. There is no understanding between adult world and baby world. The third basic association evokes the idea of birthday, which in turn evokes the question: What was before all people were born?

The concept formation starts from one basic stimulus: the picture of a dog. The stimulus evokes several basic associations which, like the rays of a cobweb, become inter-connected with fantasies. The child uses his own experiences, fairy tales, and imaginings as material for these fantasies. As in a dream, such a union might appear in *one* concept. Dramatizing the material, the child changes the scenery as quickly as in a moving picture, and with the scenery she changes the time, present, past, and future; she changes the kind of report from outside event to inside reflection, and from the reflection of the author (the child) to the reflection of the heroes of the narrative (the animals). The child not only confounds different chains of her associations but she also integrates into her thoughts parts of sentences heard. We might here compare the child's verbal expression with a gramophone disk which records different pieces of music at the same time.

THE INTEGRATION OF FAIRY TALES INTO THE ORBIT OF EXPERIENCES

Children have not had enough experiences to distinguish between the world of reality and the world of fairy tales. Thus the child integrates fairy tales into his own experiences, identifying himself with this world of imagination, and when reproducing a fairy tale the child projects events of his own life upon the narrative. If we ask the child to retell the same fairy tale at different times, we can observe the process of integration and of projection.

We observe that the integration and identification with the fairy tale increase with each repetition by the child. Experimental studies by the present author(611, 615) indicated that memorized material becomes successively more and more integrated when such material gets the value of an experience, while material in which the child is not interested becomes successively more and more forgotten.

Thus elements of fairy tales become part of the child's experiences, and if the child reproduces them either verbally or in drawings he usually tells his own story. The figures of these stories become representations of figures of the child's own orbit of living, so that any fantasy of the child, even if derived from stories heard, leads us into the child's personality.

The psychic effect of the fairy tale upon the child is very often discussed by modern educators. Some condemn the fairy tale which gives the child illusions and wrong ideas about the world; some favor fairy tales because they stimulate the child's creative imagination. We believe that the structure of the fairy tale is of the same kind as are the imaginings of a child who has never heard a fairy tale. Fairy tale and the child's autonomous thinking originate in a similar psychic level. Thus the fairy tale becomes an adequate means for the child's projections. According to Stern,(539) "The fairies and witches are nothing but quantitative embodiments of familiar qualities."

The increase of dimensions, as expressed in fairy tales, corresponds to the child's wish to become big and powerful, and the extremeness of values in the opposing forces of good and evil helps the child in his intention to differentiate, the last goal of which is the crystallization of his self. The basis for the psychic structure of the child is his self-training for an orientation in the world. The first aim is to localize objects and manifestations by experiments of repetition for securing a basis of orientation. The next step is to communicate with objects by an act of metabolism of personality, externalizing one's own personality and embodying the surroundings in it. Different objects are grouped together according to their relationship with each other, main elements are emphasized, and unnecessary parts are omitted. Action, reaction, and expression of the child work together until "individuality" crystallizes itself.

LEARNING

Learning is one of the main characteristics of life and can be found from the lowest organisms such as the amoeba up to man. Basic manifestations of learning are to avoid situations and objects which cause injury, pain, or displeasure and to seek those which cause health or pleasure. A basic function of learning is, therefore, selection and differentiation. The process of learning what is good and what is bad not only develops the function of distinction but also the function of adjustment. Animal and man have to make certain adjustments to their environment in order to avoid displeasure and to gain pleasure.

But the function of distinction can work only if it is connected with two other functions: those of memory and of association. The pleasant or unpleasant experience becomes retained in what we call memory, as a sound is engraved upon a disk. But these experiences would be a useless storage if the mechanism of association did not enable the organism to recall an experience when a new situation appears similar to that which caused the first experience. Learning is the use which the creature makes from his storage-mechanism of memory (retention) plus his response-mechanism of association (recall).

But since different situations rarely repeat themselves in exactly the same way, the functions of memory and association could not work if they were like a machine tuned to a definite stimulus. The process of learning is connected with another function, that of recognizing similarities and analogies. Although all dogs look different, the child learns very early to distinguish dogs from other creatures by their similarities, and he learns to behave in a certain way not only in one situation but also in others by means of analogy.

The process of learning still would not work as it does if it were based upon repetitions, similarities, and analogies of the total situation. When learning has taken place a creature responds not only to a recurrence of the past total stimulus but even if only a part of this stimulus reappears. This phenomenon has been described as the most characteristic manifestation of learning. The infant who has an unpleasant association with a bath may cry when he only hears the noise of running water.

Another important characteristic of learning is the establishment of relationships and the process of integration. The process of learning consists not only of retention and recall of isolated objects and situations but in relating different objects and situations to each other. One form of learning is caused by repetitions of the same or similar stimuli which condition our reaction. Thus the child learns that a strange combination of sounds forms a special word; an animal may learn, for instance, to perform certain movements with which he balances a ball on his nose. While this form of learning related to meaningless elements is enforced by frequent repetitions of the same association, another form of learning takes place immediately, namely, through inner experience. It is enforced by sensations or emotions or several associations. After having been hurt or emotionally disturbed the child learns immediately a certain situation.

The development of learning goes through several levels of complexity. The first level, based upon retention and recall, leads to a recognition of the same thing. The next level, based upon retention, recall, and transfer, leads to a recognition of a similar thing and to the recognition of the whole if only a part is presented. In the next level retention, recall, and transfer are related to the process of integration in establishing relationships between the particular learned situation and other situations.

In a further level of learning the establishment of relationships between several part experiences becomes enlarged by inventing new relationships. In this stage the child develops "insight" into relationships; he can solve a problem. W. Köhler* put a banana before the cage of an ape but out of its reach. Two bamboo sticks were lying in the cage, each of them too short to serve as an instrument in getting the fruit. The ape, fitting the sticks into each other, had insight into a situation of how to reach the banana. Learning produced problem-solving. Experiments like Köhler's were also performed with children.(16) Such a response to a new situation is not based upon conditioning but upon a grasping of relationships, partly learned and partly constructed. In a simple situation such constructions are simple; in a complicated situation the child mobilizes many associations in order to solve a problem. If the child observes certain phenomena related to the birth of a baby, he tries to relate them to his questioning about the mystery of birth. If he does not get a satisfactory explanation, he produces fantasies which establish a relationship of the data. Children's fantasies are hypotheses which help them to relate otherwise meaningless data to each other, thus facilitating their memorization by establishing relationships. These relationships may or may not have an objective validity.

Further processes of learning are accompanied by the formation of abstractions and concepts. As already discussed, it is difficult for the child to learn abstract ideas such as "good" and "bad" and to understand general concepts such as "man" for every human being. Children are, for instance, sometimes astonished that a grownup also has a mother.

* W. Köhler: The Mentality of Apes, New York, 1925.

The child's learning is determined by the search for his self; that is to say, he has no incentive to learn for the sake of learning, but learns in order to understand himself and to handle his immediate environment. He has difficulties in detaching himself from a concrete ground and from the immediate present. He establishes subjective relationships more frequently than objective ones. This deficiency is largely based upon confused environmental conditions, into which he gradually learns to bring order. In the following we shall try to demonstrate the impact of the environmental confusion upon the child through behavior records taken in a nursery school. The observer was as passive and as silent as possible, trained to get the child's spontaneous reactions.

THE CONFUSION OF WORDS

The child, hearing words which sound the same but mean something different, tries by speculations to relate these differences to each other. One child invented a story to relate the words "glee" and "glue" to each other (see p. 24) and the words "I" (ego) and "eye" (see p. 114). We give here an example of a 5-year-old boy, discussing the relationship between "hole" and "whole":(542) *

> What is a hole? It is a thing, but it is nothing. For that reason, it is a thing. I mean there is just really not anything there—just an emptiness so you can say there is something: you can say it is a hole. It is nothing, but not so much nothing that it is a thing. If it was just a little nothing, you could say it was just less of part of a thing already there.
>
> It is funny to have a name for something that is not. What do you call the part of a thing when it is taken away so that there is a hole there? What happens to the hole if you fill it up? You know, it is funny to call something that is not, a hole. A hole [whole?] means something that is all right—not broken, not with any part taken away. That is another word. But how do you tell? [Annoyed.] The spelling is different. [Irritated.] But it is mixing to have words that mean the opposite sound just the same. People hear the sound and what do they think—the opposite. And then they make mistakes but it is not their fault. It is because of the word. Who did that? Who made the words? They are bad. It is mixing enough anyhow with words not to have some that sound the same but are opposite.

THE CONFUSION OF RELATIONSHIPS

The child learns that he has his two eyes in order to see but notices that he also can see with one eye alone, and that he "sees" in his dreams when his eyes are shut.

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* P. 24.

The child hears that every voice is a sound, but not every sound is a voice.

The child, learning that everybody has a name, identifies the name with the person and realizes suddenly that different people have the same name. Two children knock at a door. Who is it? asks a voice inside. That's me, says one boy; that's me, says the other boy. Both realize that they are "me." It is difficult for the child to understand that different people have the same designation such as "mothers" and "aunts" and that the same person may have different designations such as "mother" and "aunt." The child experiences that the same person behaves very differently at various times, and if he asks the same thing at different times he may get different answers from the same person. Different persons give different explanations, so that a child complains: "I wished the grownups would say the same thing so that I could know."

Since things get their significance from relationships, the child is unable to cope with many impressions as long as he has not learned the total pattern of relationships. Children's attitudes and plays have, therefore, frequently a completely confused character. A behavior record may serve as an example. The behavior of the child was recorded when he took L. B. Murphy's Miniature Life Toys out of a box (V.C.):

> Takes things out and puts them down indiscriminately. Tries to stand girl doll up, not interested or affected when that doesn't work, returns to box. (Quick jittery movement.)—Touches nursery rocker and makes it rock gently. Then takes more handfuls of things out of box. Places bureau at head of bed, then puts it aside. Examines table and tries to open drawers.—Goes back to things in box. Tries to stuff stepladder in small drawer, gives up. Stands lamp up, then immediately puts it aside. Takes toilet, opens and closes, puts fingers in. Sets it down open, and reaches in for boy and girl doll, then second boy doll. Holds all three, looking at them, then sets them aside. Takes girl doll, pulls her dress aside in front, and stands her up to toilet. Then quickly returns her to place with others. Back to examination of table. Puts straight chair in front of it. Takes girl doll and tries to fit in chair at table. Doesn't work well at the first try so he gives up and goes back to box. Puts stepladder by crib, straight chair at table. Takes bureau, drawer falls out. He puts it in again, upside down; it sticks. He gives it a gentle shove, then puts it aside. Takes tub, looks at it upside down, puts it aside but doesn't quite abandon it. Shoves it along floor, puts fingers in under side, rubs around. Takes more things and sets them aside without looking at them: boat, bed, radio, stove, scale, icebox. (Has the air of being in a terrific hurry.) Sink falls. He stands it up again, then puts the icebox alongside stove, toilet by nursery rocker. Takes bunny and discards

it quickly. Takes father doll, then gets boy doll and girl, pushing and pressing them together in hands—bunching them—then returns to box. Takes baby doll and dumps it on pile of dolls. Grabs other green kitchen things and dumps them down. Puts chair on top of table. Adds to lineup of chairs. Puts bureaus, tub in lineup, train fashion, then two beds. Looks in box. Takes bunch of dolls, knocks train arrangement apart in the middle, leaving lineup of chairs and tables intact. Puts a doll in chair, then dolls in beds, then on top of each other heaped up in chairs. Abandons that and starts another train arrangement with crib, nursery rocker, overturned tub. Puts mother doll in crib, then adds girls, baby, father, stuffing feet down in whatever space is available—adds bunny, second baby, second mother. Puts baby doll on sink and slides it along. Knocks down boat. Slides boat over to crib. Takes father doll from crib, puts on boat, and moves along back under table. "Toot toot" (barely audible).

From the viewpoint of adult behavior, the child's attitudes have the characteristics of pathological or even schizophrenic reactions. The activities seem to be incoherent, the attention flighty, movements uncoordinated. But the difference between the child's behavior and that of pathological adults is that the child's activities form part of his learning process, which gradually becomes patterned until fixed relationships and sequences develop.

CONFUSION OF REALITY AND IMAGINATION

The source of greatest confusion is for the child to differentiate between reality and imagination. As already discussed, the young child cannot differentiate between the fantasy of fairy tale books or cartoons and real happenings. The child's own dream world mingles realistic and unrealistic images; the latent potentialities of objects such as fire in the match, voices in the radio, create distrust of the appearance of things. But the more experiences the child has, the more is he able to establish relationships, thus differentiating the world within from the world without. The following record demonstrates how with two boys of equal age one is overwhelmed by imagination, while the other already has criteria to check upon reality.

In the midst of playing in the snow-covered yard (V.C.):

HENRY: (Looked up and beamed, shrieked with pleasure) "Here's a NEST, look, Herbert!" (pointing to hornets' nest).

HERBERT: "No nest."

HENRY: "Yes, a bees' nest."

HERBERT: "They don't make it in the winter, do they?"

HENRY: "Well, there it is. Bees just eat you up."

HERBERT: "No, they just sting you."

HENRY: (pointing) "Here's another."

(They prowled around the shed, looking at beams, chatting together.)

HENRY: "I don't like those bees."
HERBERT: "They won't hurt you any."
HENRY: "Look at all those white bees coming in our fire house."
HERBERT: "That's just snow, Henry, don't be afraid."
HENRY: "I'm afraid to look at the bee nest."
HERBERT: "Why?"
HENRY: "There's a bee, I think, in it."
HERBERT: (soothingly) "No, Henry."
HENRY: "I THINK there is."

(Silence while Henry slowly and thoughtfully dusted the snow off a block.)

HENRY: (finishing up the conversation) "Bees say buzz . . . let's open the door."
HERBERT: (slow, patient, old man tone of voice) "All right . . . all right, Herbert."

The child's learning process related to the environmental confusion is necessarily different from the learning process of adults. Since learning is a very complex process based upon faculties of retention, recall, and integration, it depends on the development of all these faculties. The more the child becomes able to make problems meaningful and a related part of his own activity, the more effective becomes his learning process.

LEARNING AND PERFORMANCE

Experiments have been performed which show various functions of memory and learning in preschool children, the effect of practice and the progress made during practice is demonstrated in "learning curves," and differences have been observed between the progress of children of various ages in solving problems.(112, 188, 267, 300, 334, 401)

Studies have been made comparing the faculty of learning with that of intelligence, comparing the learning abilities of white and of Negro children, studying the relationship of learning to reward and punishment, and the value of help in learning.(148, 232, 376, 377, 458, 606)

All these studies investigate the process of learning from the viewpoint of information or performance. But the child's learning and his memory are not only the product of his collecting of data or of his practice and training; they are a product of his dynamic personality and cannot be detached from the child's struggle for his self.

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16, 18, 75, 89, 100, 211, 214, 291, 300, 325, 334, 340, 414, 458, 477, 479, 480, 507, 522, 554, 606.

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79, 112, 168, 188, 235, 537, 595, 626.

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5, 17, 25, 48, 69, 70, 78, 85, 108, 113, 120, 141, 155, 159, 185, 206, 219, 250, 270, 299, 367, 389, 405, 406, 498, 526, 528, 535, 545, 574, 628.

Concepts of time

260, 367, 435, 500.

Chapter II

THE EMOTION OF CHILD AND ADULT

The Range of Emotions

The word "emotion," from the Latin *emovere,* to move out, describes a state of excited feeling of any kind such as pleasure, grief, joy, or astonishment. The child brings with him into the world at least the disposition to some basic emotion. Watson distinguished three, namely, fear, rage, and love. However, recent research has not substantiated a theory assuming any number of basic emotions. While the child at birth seems only to manifest one undifferentiated emotion of general excitement, the emotions differentiate during his growth. K. K. B. Bridges(87) lists the following development of emotional patterns:

Birth: Excitement
3 months: Excitement, delight, distress
6 months: Excitement, delight, distress, anger, disgust, fear
12 months: Excitement, delight, distress, anger, disgust, fear, elation, affection
18 months: Excitement, delight, distress, anger, disgust, fear, elation, affection (for adults and for children), jealousy

The emotional patterns grow further with the child's growth. It has been observed that true grief does not appear until the child is several years old. Emotions are not only a product of learning through experiences from without, but also a product of maturation, i.e., an unfolding of given potentialities. F. Goodenough* studied a girl of 10 who had been totally blind and deaf from birth; thus she could not have learned emotional responses from imitating others, but she reacted according to the general descriptions of emotional behavior.

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* J. Abnorm. & Social Psychol., *27,* 428-33.

An exact description of the child's emotions is rather difficult since we easily read into an infant's behavior our adult explanation. It has been found that many observers agree in their judgment of the meaning of an infant's emotion if the observers know the nature of the stimuli used, but their judgment did not show agreement if the observers did not know the nature of the stimuli.(517) The child's emotions become more and more complex during his growth; that is, the pattern of each emotion changes at different age levels. Since emotions are connected with associations, the emotional world of the child differs completely from that of the adult. The adult's emotions are related to other persons or to values. The emotions of the young child are not yet definitely directed toward a certain person because the relationship between self and non-self is not yet accomplished; objects are not yet conceived as definite unvariable structures; values are not yet set. The child's emotions are to a large degree a rather blind discharge of energies. Since an accumulation of energies, if not discharged, brings tension and displeasure, the discharge is experienced as satisfying; hence, bodily as well as emotional discharges evoke a feeling of pleasure. Children's emotions are not like those of the adult, which usually are directed against a certain person or object, but some person or some object may release the energy waiting for discharge. The child's emotions are facilitated by preceding frustrations. If the child's drives do not find an outlet, if they are blocked, they may either explode or flow in a new channel. For instance, if a child frustrated by an adult is prevented from discharging his energy against the adult, he may break his doll as a substitute. In a third form, frustrated drives may regress; they flow back into the child, where they may find a discharge in bodily symptoms such as bed-wetting.

The child's emotions are fluctuating, because they are not connected with any fixed associations. The child's emotions have no moral connotations since no conventional values are established in him. Since the child separates his functions only to a limited extent, all his functions can be used as an emotional outlet. The child's entire life is characterized by emotion in the very sense of the word which means "to move out." The child's identification with objects is a continuous moving out of drives and imaginations.

INDIVIDUALITY AND SELF

The individual begins to express himself in the family group to which he is originally attached. The first step of the individual is to differentiate himself from the group; he develops certain characteristics with which he distinguishes himself from the others. The child does not yet take the initiative of differentiating his individuality. The intentional differentiation of the child's individuality begins with the child's becoming conscious of himself.

Children differ from each other even during the first months of life. A. Gesell,(214) M. C. Jones,(313) N. Munn,(422) and others have shown how primary reactions such as blinking, eye coordination, reaching, sitting, and smiling vary in their expression. Individuality means that each child perceives and reacts differently and therefore interprets the world in an individual way. In interpreting his experiences the child projects his own individual concepts upon the given data.

Showing a picture of a crying baby to different children in a group, each of them between 4 and 5 years of age, the observer asked, "Why is the baby crying?" We give a few answers as examples:

> "Because she doesn't like to take a bath."
> "It's Helen—because her mommy spanked her."
> "I think she wants her mother. I think somebody locked her in there."
> " 'Cause somebody's going to hurt her."
> "I think she hurt herself."
> "Because he's locked in jail and has to go to the bathroom."
> "I don't know. I think that she's going to be burned up—that the witch is going to burn her up."

As can be observed at first glance, the reactions of these children are very different; each child projects his individual associations upon this picture. The associations consist either of the child's own experiences, as in

> "Because she doesn't like to take a bath,"
> "I think her mommy spanked her," etc.,

or of the child's fantasies, which are related either to some happening heard or to fairy tales—

> "Because he's locked in jail,"
> "I think that she's going to be burned up—that the witch is going to burn her up," etc.

If corresponding reactions of the same child appear on different occasions we have an indication that these associations are not accidental ones but are expressions of personality. We then might distinguish between children for whom experienced happenings play a dominant role (realistic type) and those living in imagination (fantasy type). The individual projections indicate that the young child is already an individuality. The reactions of some of these children show, however, that there is a great difference between the individuality of the young child and that of the adult. No adult, when seeing the picture of a crying baby, would explain the crying: "Because he's locked in jail and has to go to the bathroom," or, ". . . that the witch is going to burn her up."

The child's world is not mapped; the whole world around him is unknown; all seems to be possible because the child has not yet begun to make his explorations. It is quite natural that the exploration of the world begins with the exploration of the nearest surroundings, and the nearest is, for the child, his own body. It seems not to be necessary to follow psychoanalysis, which explains the child's interest in his own bodily functions with the assumption of early sexual trends. The infant's first exploration of his own body seems to be the movement of his limbs; his first discovery is that his thumb or toe fits into his mouth; now he discovers sensations, movements, expressions. The individuality of each child crystallizes with the differentiation of his reactions. When the child feels: I am crying, I am eating, he discovers his ego. The child has an individuality as he has an ego, but he is not able to see his ego as an individuality. The child identifies himself with animals, splits himself into imaginary persons; he does not yet have an organized self.

THE CHILD'S BELIEF IN MAGIC AND MYSTICAL PARTICIPATION

Since the child's knowledge of natural causes and effects is very limited, he creates a concept of causality of his own.(466) The child, who considers the world not so much an objective phenomenon as material for his self-development, tends to take himself as a frame of reference; he does not always accept causality as offered by the world outside but frequently assumes that it is he himself who makes the relationships, who makes the causality. From this viewpoint there develops the belief in magic and in omniscience. Because of his feeling of inferiority and insecurity, the child escapes into daydreams in which he is all-powerful. Every child daydreams to some extent,(518) and since the distinction between daydream and reality is not firmly established, the child acts also in reality according to a belief in magic practices. Fairy tales and religious ideas support this concept of a magic world. This concept is checked when children become aware of facts; however, its fragments frequently remain in some form throughout life.(86) *

The concept of magic leads the child to the belief that he has not only a magic influence upon persons and objects, but participates in life manifestations around him. A 4-year-old child, seeing the moon all along his walk, exclaimed: "I make the moon follow me." The child who throws a ball may believe that he has an influence upon movements of objects not only by means of his hands but also by means of other functions of his organism, including his thoughts. The French anthropologist Lévy-Bruhl † coined the word *"participation mystique"* to describe the main characteristic of the thinking of primitive people, namely, that the individual does not have the feeling of being a closed entity, but that he has mystic bonds to other persons and even to objects which he can influence by extrasensory means and by which he is influenced in the same way.

In children, too, the lack of relationship between phenomena of which the adult is conscious because of his experience is replaced by another kind of relationship which the child imagines as existing—a mystic participation. Stern recorded the following observation:(539) ‡

> The boy (2:1) in a house that was strange to him had been given a doll and made it smell the plants standing in the winter-garden, each time saying, ha-psi. The syllable "ha" was spoken on a middle note of the voice, then, after a pause, "psi" delivered in an incredibly high chirp.—After he had made the doll smell a number of little flowers standing in a low box, he came to a fairly large India-rubber tree standing on a higher table far above the others. The height of "ha-psi" at once changes: instead of the shrill chirp the syllables were uttered in a rather low muffled tone. Thus we see that the high chirp belonged as a matter of course to the little flowers and the tall appearance of the India-rubber tree at once created a change in the whole situation, a general feeling of size which produced, as a direct result, a corresponding change in the vocal expression.

The child participates in the outer world with his whole being. H. von Hug-Hellmuth(287) § gives another example: "A girl of six years begs earnestly that the Christmas tree be not burned after the holiday, because that hurts the Christ-child." Here the child expresses what Lévy-Bruhl calls in primitive peoples a *"participation mystique."* Both phenomena, the lack of realistic relationships and the substitution of magic or mystic relationships, seem to be due to the fact that the child has not yet centered his self.

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* P. 356.
† Primitive Mentality. New York, 1923
‡ P. 362
§ P. 71.

THE CHILD'S DELIGHT IN HIS BODILY MANIFESTATIONS

The earliest psychic manifestations of the child, such as joy, satisfaction, anger, or pain, are closely related to his skin sensations, as, for example, the sensations that come to him from his contact with any object by touching, tasting, eating, from thumb-sucking, bowel movements, etc. These sensations form a complete unity out of which develops step by step the child's personality. In the first stage the psycho-bodily unity is expressed in rhythmic patterns which we observe in the earliest activities of the young child. Children often combine different activities into one rhythmic pattern (see p. 21). A 4-year-old boy, for instance, used one hand to suck his thumb rhythmically and the other to pull his own ear or that of his teddy bear in the same rhythmic fashion, explaining his enjoyment of pulling his ear with the words, "The ear is so fresh."

The child's enjoyment of his function of urinating and defecating has been observed very often. Psychoanalysis sees here a manifestation of "urethral" and "anal" erotism.(503) Even if these sensations might have some similarity with sexual sensations of the adult, the application of the term "erotism" for the little child seems to be misleading since these sensations play a different role for the young child than for the mature personality. The child's delight in his bodily functions seems to correspond to his delight in the nakedness of his own body; but also this delight, which at first glance seems to be similar to that phenomenon which we call auto-erotism or narcissism in the adult, seems to have another structure in the young child. His delight in his own body or in his own bodily functions, such as excrementation, is not a "perversion," as Freud would have us believe, who calls the young child "polymorphously perverse," because a perversion appears only if a natural trend becomes channeled in a wrong direction. The trends of the little child, however, have had no former direction at all, since the child has not yet formed two poles for the dynamics of his energies: the self and the non-self. The child's sensations are like an explosion of energies, and the delight which he experiences on the occasion of these explosions seems to be his recognition that he has such energies. The delight in his own body is the delight in recognizing that he possesses a body; and it is not so much a delight in the sensation as in the power of his own body: "Like a stream I am rushing," or, "I'm gonna make a pila bumps as big as this house." M. S. Dillon(161) found that the emotional attitude toward the body increases with the child's age; young children lack self-consciousness about nudity. The development of self-consciousness, however, parallels the development of the self.

THE STRUCTURE OF THE CHILD'S AGGRESSION

The child, after his sensation of thumb-sucking, urinating, defecating, or masturbating, very often looks pale, drawn into the depth of his sensation. The child is submerged by his inner stimuli, fascinated or afraid of himself; sometimes he is conscious of the fact that he is overcome by his own reactions. Steve, when asked why he yelled so loud when Herbert could hear him perfectly, answered: "I know—but I always get so mad. I'm sorry I do, but I get very mad and then I yell at people."

The behavior of aggression has a different significance in the preschool child and in the adult. Aggression in the adult is the direction of energies of the adult's self against non-selves; but the child, for whom the self and non-self are not yet differentiated, does not direct his aggressiveness. The aggressiveness of the young child is an explosion of his energies, as is the case with his other bodily functions, and the delight in this manifestation may lead to phenomena which appear to be similar to those that are called "sadism" and "masochism" in the adult, yet their structure again is different in the young child. The child attacking another person is not interested in the reaction of that person, but in the experience of his own explosion. The child's well-known love of destroying objects was sometimes explained as an expression of natural "malice," but the child has not yet a table of values for enjoying his own "malice." Stern(539) * gave an explanation which coincides with our viewpoint:

> The child in handling things and practising his strength on them meets with opposition and is spurred on by this to so much the greater exertion, and delights in the final victory without heeding any other results.

We give examples of different forms of aggressive behavior in preschool children.

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* P. 322.

SADISM AND MASOCHISM IN YOUNG CHILDREN

Behavior which appears to be similar to an adult's sadistic or masochistic behavior can be observed at the earliest age. The Scupins describe sadistic trends in their boy at the age of 9 months:(509) *

> Without pity his hands scratch over faces so that we cry out with pain. Often during these acts there comes a truly cruel gleam in the boy's eyes, his nostrils inflate, and he goes on with the martyring process, such as pulling out single hairs, making grasping movements toward our eyes, pinching us and scratching us.

Hug-Hellmuth(287) † reports auto-aggressive masochistic tendencies:

> My nephew in his fourth year used to squeeze one foot into an iron coal rake and run around the room in that fashion, laughing and crying out: "Oh, oh, I cannot bear it."

A 4-year-old boy said: "I hurt myself to see how it feels."

All things in the child's environment are hooks on which he hangs his emotions. The following record, taken during lunch, illustrates this general mechanism (V.C.):

ERIC: "You can hurt yer food—I stick it. Harry, you can stick it [pokes his food with his fork]."
HARRY: "You can bite it, too."
ERIC: "Yeah, bite food—it don't matter."
HARRY: "Tigers eat children for dinner. Baby tigers too. They like 'em.—I'm gonna beat Miss A. I really am."
ERIC: "I am too."
HARRY: "I bet you couldn't beat her."
ERIC: "I could beat you, Miss A."
HARRY: "Sure, we could beat her. I bet we could break this whole house down [arrogantly—throws his napkin on floor]. I throw it away.—Shall I knock the ice cream over?"

(They begin punching each other at the table.)

ERIC: "I'm gonna spit on my spoon [they stir vigorously]."

(They stir, spit, stir, spit, pour milk out of their glasses into ice cream and stir with great absorption.)

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* P. 41.
† P. 154.

HARRY: "Now let's feed our doggie, shall we? Let's make believe this [his glass] is our doggie."

(Eric puts one glass inside the other. Changes voice to high squeak.)

ERIC: "I have a little doggie—nice little doggie."

HARRY (suddenly): "There's a fly in here. Don't let him get in yer dessert."

(Eric quickly covers glass with butter chip and holds it down.)

HARRY: "Don't you get in here, you fly."

ERIC: "You dirty fly."

HARRY: "You darn dirty fly.—Shall we throw ice cream at that fly? Where is that darn rotten fly? [Looks around.] Is he in that basket [wastebasket]? He must be."

ERIC: "He can't get me. He can't get me. If he does I'll shoot him with my bone and arrow.—There he is. [Reaches out with spoonful of soft ice cream and hurls it at the near-by fly; it misses.]"

HARRY: "Throw a bunch of it on."

(Eric gets spoonful ready. Holds it expectantly.)

ERIC: "I throwed some at 'em."

HARRY: "Did you throw it at 'em?"

ERIC: "Yes, sir!"

HARRY: "Hey, fly, fly, come in your house."

ERIC: "When you get in here we will shut you up."

(Eric spits at Harry.)

HARRY (to observer, indignantly): "He SPIT at me!"

ERIC (to Harry): "Let's spit at her [observer]."

VERBAL AGGRESSION (V.C.)

HARRY: "You're going to jail."

GORDON: "I gotta real gun."

HARRY: "Is that so! I'll tell the cop on you. My daddy is a real policeman, whether you know it or not."

GORDON: "You're a liar."

HARRY: "I am not a liar. I can tell the cops and they'll put you in jail."

GORDON: "I can chop your head off with this shovel."

HARRY: "I'll blind your eyes—I'll strangle you."

GORDON: "I got a *real* hatchet."

HARRY: "My father is going to spank you."

GORDON: "Is that so!"

HARRY: "He's going to punish you and give you a black eye."

GORDON: "I'll give him a black eye."

HARRY: "I'll tell—I'll tell my cousin to put on his sailor suit and take you in the ocean and then and then he's going to shoot you with the cannon in the boat and I'll throw you in the ashcan and shut it."

GORDON: "I'll take my cannon and I'll split your head in half."

FLOYD: "I want to tell you something. I'm going to take my saw from home and saw your bones to pieces. I'll saw your ears off."

GORDON: "I'll hammer a nail in you . . . put a piece of wire down your throat and you'll choke."

FLOYD: "I want to tell you what I'll do. I'll put a bullet in your mouth."

HARRY: "I'll put—I'll put—I'll put spyglasses in your mouth."

GORDON: "I'll put a car tire in your mouth."

HARRY: "I'll put a bicycle in your mouth."

FLOYD: "I'll put the whole world in your mouth."

HARRY: "I'll make a bump on your head. I'll make a bump on your mouth."

GORDON: "I'll ask a policeman to put you in jail. Hey! I'll put a policeman down your throat."

AGGRESSION REALIZED IN IMAGINATION (V.C.)

PAUL (to observer): "Jane likes to go on the campus when my mother comes and spanks me."

OBSERVER: "I never saw your mother spank you."

PAUL: "She spanks me sometimes."

OBSERVER: "Do you think boys should never be spanked?"

PAUL: "No."

OBSERVER: "Girls?"

PAUL: "No, not big girls. Jane could be spanked."

OBSERVER: "How about big boys?"

PAUL: "Yes—no boys should be spanked."

OBSERVER: "What about daddies—when do they spank?"

PAUL: "Daddy doesn't ever spank."

OBSERVER: "When you have a little boy, will you spank him?"

PAUL: "Yes, I will—I'll spank him and I'll hurt her and I'll kill him."

AGGRESSION REALIZED IN ACTION (V.C.)

(Explanation to the observer of hitting each other:)

GORDON: "Every time I go to his house he hits me back and I hit him back, and some day I'm going to his house, and he says something he's going to do to me, he's going to get a stone and throw it in my eye."

OBSERVER: "Why does he want to throw stones at you?"

GORDON: " 'Cause he doesn't like me any more."

OBSERVER: "Why?"

GORDON: " 'Cause I'm, 'cause his father is a doctor and he says, he says, his father is a mean father and he told Peter to get a stone next Sunday and get a stone in Gordon's eyes."

OBSERVER: "I don't think so."

GORDON: "You know why? 'Cause he, he, he always, he always says I'm a bad boy and his father told I'm a bad boy, so you know what? I told Peter. I'm going to get a plan to do something,—Peter's going to throw it first—and I throw it back and then Peter throws—throws another stone and it hurts me more and another stone hurts more, until I get blind and have to go to the hospital and get better again and go home again—I keep throwing stones at him and he keeps throwing stones at me."

AGGRESSION AS A FUNCTION OF PSYCHIC TENSION

The primitive form of aggression is a blind explosion of the child's undirected energy. With the increasing development of the child's psychic structure his different psychic functions become related to each other. Now the aggressive explosion does not operate blindly but is provoked by certain processes within the child's structure. The following record may serve as a demonstration (V.C.):

Ben swaggered into the bathroom. He looked at Steve, who was standing in front of the first toilet.

He pushed Steve over to one side of the toilet and he stood on the opposite side. "Let's—let's do it in the same toilet," he said.

Neither boy spoke a word to the other during this time.

Ben left the toilet first and went over to the washbowl, saying to Steve for no apparent reason: "I'll shoot you. I have a real gun, and I'll shoot you the next time I come."

Steve said that Ben would not.

Ben replied in a very matter-of-fact way as he ran water in the bowl, "I have a gun and I'll shoot you. And you'll try to get sick and not come."

He nodded his head and repeated, "You'll try to get sick and not come to school tomorrow."

Steve replied that he would shoot Ben, too.

Ben was automatically soaping his hands. "You haven't a gun," he retorted to Steve.

"I have."

"You haven't."

"I have."

"You *haven't* a gun." Ben settled that matter.

Then he added, looking off into space, "You'll try to shoot me, and I won't die."

Steve began again to claim ownership to a gun.

Ben said scornfully, "You think so, don't you."

And when Steve insisted, Ben, inspired, said, "Anyway, you haven't any real bullets."

Steve thought a moment and then said, "My mommy will shoot you."

Ben retorted, "She won't. Mommies are very good."

Steve: "Mine isn't."

Ben: "She is so."

Steve: "She isn't."

Ben said very emphatically, "She is. Every mommy in the world is good." He grabbed his comb from its hook: "I can beat you. You have to wash your hands and dry your face and I don't." He finished with a flourish and said to Steve as he firmly hung up his comb, "There, I beat you, I beat you."

The preceding record gives us an insight into the genesis of symbolization and its relationship to the psychic dynamics. The biological discharge also stimulates an emotional discharge. As the act of urinating evokes the association with shooting, the child uses this association for the aggression against his friend Steve. This process indicates how the penis and its function becomes symbolized by a gun and by the act of shooting, and how one symbol may represent two opposite meanings: that of attraction and that of hate. Psychoanalysts have observed very often the symbolization of sexual functions by the act of shooting. But as far as this author knows, the mechanism of such a symbolization has not been demonstrated. Our record shows furthermore the persistence and the transfer of such symbols. Several other associations and situations have followed those of shooting; however, the aggressive factor has broken through again and again.

AGGRESSION AS A COMPENSATION

The child's aggressiveness against other children is sometimes different from his aggressiveness against adults. L. B. Murphy(427) observed that children who are more aggressive against adults seem to be more sympathetic toward other children. R. K. Caille(114) found that aggressive children resist other children more than they do adults. According to B. W. Hattwick(264) there is a high correlation between aggressiveness and feelings of insecurity. A feeling of insecurity leads to a frustration of emotions, and the emotional drives which do not find a normal outlet explode in the behavior of aggressiveness. The relationship between frustration and aggression, studied by J. Dollard et al.,(165) may be explained as the organism's attempt to establish an equilibrium by discharging stored up energies in an explosion manifested as aggression. According to this concept, aggressive behavior can be changed not by punishment, which only creates new frustrations, but by methods that will bring the child into an equilibrium.

Another motivation for aggression is compensation. The child who feels instability tries to appear strong and powerful. But a child frequently suffers from his own aggressive behavior and then withdraws from situations which stir up his emotions. Such a child likes to be alone and discharges his aggression in daydreams.

CHILDREN'S FEARS

Just as the child's active emotions are not necessarily conditioned by outer stimuli but by an "explosion" of unemployed energies, so the child's passive emotions, his angers and fears need not be related to any dangers which actually threaten him.

Watson(592) saw two origins of unlearned fear in the infant, namely, noise and loss of support. A. T. Jersild, F. M. Markey, and C. L. Jersild and F. B. Holmes(302) classified children's fears. The largest single cause of fears was mysterious events; second, animals; and last of all, bodily injuries. These causes and single fears, as of dark rooms, being left alone, terror dreams, etc., seem to have in common the factor of insecurity based upon unfamiliarity and unexpectedness. But fear is also a reflection of the child's own projections. The child animates the objects around him and is suddenly not able to handle so many images, which develop beyond his control. This is shown for instance by an observation of Frobenius:*

> A professor is working at his desk, while his four-year-old daughter is running about the room. Her commotion disturbs him, so he gives her three burnt matches and says: "There go and play with these!" The child sits on the floor and plays with the three burnt matches, which she names Hansel, Gretel and

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[*] Quoted by Koffka,[340] p. 367.

> the witch. All goes well for a time, when suddenly the child startles her father with a frightened shriek. "What is the matter? Has anything happened to you?" he asks. The child runs to her father with evident fear and says: "Father, take the witch away, I'm afraid to touch her."

The emotion which the child projects upon the matches suddenly becomes reflected as fear of the matches. The adult is more apt to channel his emotions, to keep them under control, while the child's self is not yet developed to direct them.

The delight which the child experiences at times from his sensations and emotions seems to be operative also in the case of his fears. The child is thrilled by his fears just as the adult later is thrilled by terrorizing scenes in the movies.

ANGER AND JEALOUSY

The young child projects his emotions upon all objects which surround him, making them a part of himself. He believes that he can direct objects just as he directs his own body; he believes he has magic power over the world surrounding him (see p. 37); and he tends to ascribe consciousness, his own motives and thinking abilities to things—at first to all things, then only to moving things. The child gradually discovers his self by differentiating himself from the objects, by withdrawing his projections from the objects and centering his feelings and emotions in his own personality.

Any interference with the projection of emotions causes anger. Anger can be aroused by the thwarting of wishes, interference with movement, and the blocking of activities that are in progress. Since these emotions are not centered in the child's personality, they vanish as quickly as they arise. F. Goodenough(228) found that the after-effects of anger were almost twice as frequent and prolonged in children over the age of 4 as in children under 4.

The interference with the child's projections causes not only anger but also jealousy, an emotional pattern which embraces a group of symptoms. Jealousy usually applies to a chronic or lingering condition of resentment rather than to a fleeting outburst. While anger is a more undifferentiated explosion, the emotion of jealousy is directed toward specific individuals. Characteristic is the jealousy directed toward a younger sibling. Jealousy is connected with the child's competition for the affection and attention of his parents. Behavior which indicates an attitude of jealousy is frequently little different from an attitude of anger. The behavior ranges from overt attack, as when a child strikes the sibling who has just received a parent's caress, to various types of cruelty, both subtle and obvious, such as efforts to annoy, mock, tease, or disparage the individual who is the object of resentment.

The same emotional response in different children may arise from different sources. There are frustration, insecurities, overactivities, hidden attachments, hidden fears, drives for attention, which motivate the discharge. Motivations for anxiety, for instance, may be the feeling of insecurity in an incomprehensible environment, reactions to surprises, reactions to insoluble questions, the feeling of isolation, lack of protection, projection of dreams, fairy tales, bewilderment, conflicts between dream and life reality, and the reaction to each interrupted activity. The adult, who either knows what to expect or is accustomed to sudden changes, and whose activities are differentiated into many parts, is not so easily vulnerable to a break in continuity as is the child. The child lives in a state of fluidity, and the interruption of this stream evokes emotional explosive reactions. The break of such a continuity appears frequently, for instance, when the mother calls the playing child for lunch; in such a way the child becomes disposed to emotional reactions. Since the child identifies himself with all objects, and because of the mechanism of transfer by which a part of a stimulus may function for the whole, the range of stimuli capable of evoking emotions in the young child is much greater than in the adult.

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(Numbers refer to those in the general bibliography.)

Emotions in general

76, 87, 92, 122, 167, 172, 191, 221, 230, 307, 320, 349, 397, 402, 475, 517.

Laughter

84, 171, 300, 314, 332.

Anger, fear

84, 179, 228, 254, 259, 280, 302, 304, 579.

Aggression

32, 44, 60, 111, 150, 165, 186, 353, 426, 613.

Resistance

114, 360, 426, 489, 596.

Sex

119, 161, 182, 196, 197, 198, 203, 204, 261, 335, 503.

Chapter III

THE FIRST CHARACTERISTICS OF SOCIAL LIFE

Family Relationships. The Parents

The first social relationships the child experiences are those with father, mother, and siblings. Psychoanalysis emphasizes that the child's position to father and mother becomes one of the most determining factors in his later life. It may be questioned whether the child's emotional bondage to his parents is caused by sexual drives, but affective love can undoubtedly be observed in the child-parent relationship. This might be explained, however, by emotional factors which appear in any close social relationship. The author's investigations indicated that children between the ages of 3 and 5 years, girls as well as boys, have a closer relationship to their mother. However, this is motivated socially, since in the life of the child the mother plays a much greater part than does the father, who in general is near the child only a few hours daily. Thus to the child the father is rather a stranger whose sudden appearance interrupts the close child-mother relationship. An interruption of an accustomed situation has the effect of a shock experience which provokes emotions of displeasure up to aggressiveness against the intruder. When the father requires the mother, the child considers him as somebody who destroys his emotional relationship. The Scupins report of their little boy's aggressive attitude against his father:(510) * "But I will put my papa in a pot and keep on pouring water over his face until he is nice and soft and then eat him up."

The child's play sometimes reveals that one parent is much more important to the child. Jean, playing with dolls, said: "Here's the mother, here's the father, here's another mother, more, more, more mothers." Steve said to his comrade: "We are mothers, Gordon, we are mothers, the rest are fathers, anybody we don't like are fathers."

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* P. 81.

Since the child has his closest social contact with his mother, his drives, emotions, and feelings are centered around her. The little boy, identifying himself with his father, likes to be near the mother in the same way his father does. However, if the boy desires to sleep with his mother this has not necessarily a sexual connotation. The following record shows that the child's wish may be deflected (B.C.):

ANDREW: "Mommy, I love you so much that I would like to marry you."

MOTHER: "I love you too, Andrew, but I cannot marry you because I am already married—and then I am too old. When you are old enough to marry I will be very old. You will marry a girl, young like you."

ANDREW: "All right, but I want you to come with me and look around for her."

MOTHER: "But she shouldn't suit me, she should suit you!"

ANDREW: "But I want you to tell me whether she is old or young, how can I know that?"

Some months later:

ANDREW: "I would like to sleep in a big bed like yours."

MOTHER: "When you are grown up and you marry, you will sleep in a big bed too."

ANDREW: "But I don't want to sleep with a wife, and I don't want to marry her. I want to sleep with you."

MOTHER: "But I am already married to daddy, and I sleep with daddy. When you are a man and if you marry you will sleep with your wife."

ANDREW: "But I don't want to marry!"

MOTHER: "Why not?"

ANDREW: "Because I don't want to sleep with someone I don't know."

MOTHER: "But you will know your wife before marrying her. You see, when you are a man you could marry Margaret or Patricia or Ann—and you know them, don't you?"

ANDREW: "Oh, all right! That's fine!"

The child's personality, especially his social behavior, is patterned by the parents' attitude. Four factors are of main importance:

First: the balance of behavior. It is decisive for the formation of the child's equilibrium whether the relationship of father and mother to each other is harmonious or full of tension; furthermore, whether the attitudes of father and mother to the child are similar. If one parent is always fondling and shielding the child while the other has the role of punishing, a tension will develop in the child's personality. The stimulation of opposite projections upon the parents lays the foundation for the development of a neurosis in later life.

Second: the consistency of behavior. Parents whose behavior is unpredictable delay the child's formation of his self, which is based upon a feeling of stability and security. If parents discharge their moods upon the child, the child, imitating them, will also become moody, nervous, and overemotional.

Third: the attitude of objectivity or subjectivity. For many parents the child is an object of their projections. A mother may treat her child like a doll, as an instrument to play upon and to overcome boredom. She will continuously be occupied with the child, not giving him time to develop his own personality. Another type of mother discharges her unfulfilled desire for love upon the child, torturing him with tokens of affection and inhibiting his free development by overprotection.(359) A father may try to develop his child into a person he always wanted to be himself, imposing upon the child's personality a frame which does not fit him. If the child is molded according to subjective standards and not following his own personality pattern, the development of artificial instead of genuine trends in the child will necessarily disturb the development of his personality.

Fourth: the attitude of superiority or inferiority. An overemphasis on authority and superiority of the adult will likely develop an inferiority complex in the child. But also the opposite behavior, that is, praising the child on any occasion in the presence of others, yielding always to his cryings, temper outbursts, and desires, may develop a feeling of inferiority and insecurity if the child soon experiences that he does not get the same gratification from other people. On the other hand, if parents try to frighten the child with threats or put demands above the child's capacity, anxiety will develop and the formation of ideals will be inhibited.

Since the parents form the basic environment for the young child, their attitude determines the child's future social relationships, and since the parents are models for the formation of the child's ideals and values, they pattern the entire world conception of the child.

The following record was taken in a nursery school (V.C.):

BETTY: "I don't want to play. My father doesn't want me to play. —What is your name?"

OBSERVER: "Elaine."

BETTY: "I don't like your name. My father wouldn't like your name either.—What's your father's name? Does your father like you? He won't like you when you're old. My daddy's gonna like me when I'm sixteen.—What is that brown spot in your face?"

OBSERVER: "It's like a freckle, only very large."

BETTY: "Does your mother love you?"

OBSERVER: "I think she does, Betty."

BETTY: "Well, but does your father love you?"

OBSERVER: "Yes, I think he loves me too, Betty."

BETTY: "My mother could kick you if she was here.—I don't like you. I'm going to kick you. I'll kick the nursery school down, I don't like it.—I hate you, I hate everybody, but I don't hate my mommy. I like rainy days—I hate sunny days."

SIBLINGS

Observations made by the methods of individual psychology indicate that the child's position in the family is of highest importance in the development of his personality. According to A. Adler(7, 8) the first, second, and third child each shows definite characteristics.* It is important whether the child is an only boy among girls or an only girl among boys. Several studies in the psychology of only children have been made. Although there is no complete agreement on findings, we have some indication that only children produce a higher proportion of delinquency,(109, 448) but that, on the other hand, they show superior traits.(620) The only child, getting specific attention, may live up to the standards set, thus becoming superior, or by overprotection he may feel unable to fulfill the set standards, thus possibly becoming delinquent. This, however, is only the extreme development in a great variety of possibilities.

If a child has brothers and sisters, rivalry, especially for the attention of the parents, may produce jealousy. According to Murphy and associates⁽⁴²⁶⁾ jealousy is here a form of aggression against a child who threatens the status of another child. But instead of jealousy there may also develop an attitude of positive competition or of protection.⁽³⁸³⁾ The following record, taken in a nursery school, is an example of a girl's emotional reaction against her little brother (V.C.).

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* This theory is now disputed.

BETTY: "My sister has fat and chubby legs."
OBSERVER: "She must be cunning, Betty."
BETTY: "Yes, she is, dear little thing. She has chubby legs. They're all fat.—But I hate my brother."
(Although Betty has mentioned her sister in a motherly fashion every time, it was the first time she had mentioned her brother.)
OBSERVER: "Why do you hate your brother?"
BETTY: "Because he calls poor Carrie awful names. He calls her 'pork sides' and 'square head.' "

THE NEWBORN

The aggression of the preschool child is especially strong against a newborn sibling. These reactions of hate, sometimes altered in later phases by special manifestations of an affection, seem to indicate very clearly that the early emotions of love and hate are determined by social factors and not by sexual trends. This again seems to support our belief that affective relations toward the parents also are mostly conditioned socially. The newborn appears as an intruder, depriving the child of his exclusive position in the family composition as the single child, and the emotional reaction is understandable from two motives. In the first place, all emotional trends are much stronger in the young child, as he has not yet learned to channel his emotions. Second, the lack of an established self makes the child especially vulnerable in his feeling of security. The immediate wish of the little child is to make the newly arrived competitor disappear. We know of a case of parents who, coming back from a walk, could not find the baby. After questioning their 4-year-old boy he finally answered: "Sister is in drawer."

The tragic case of a boy who threw his baby sister out of a hatch is an application of children's fantasies that babies come through the window and should be thrown out the way they have come.

In M. Sewall's study⁽⁵¹⁴⁾ of seventy children who had a younger brother or sister, over 50 per cent showed negativism against the baby either by bodily attacks (37 per cent) or by denying his existence or by a neurotic attitude such as refusal to eat, destructive behavior, etc. In R. Smalley's study(525) negativism was most marked when the baby was a sister, next when it was a brother, and least frequent when the baby was of another sex than the older child. We shall later present records and drawings of children who express their negativistic attitude against the newborn baby. One of these children, a 4-year-old girl, repeatedly played being a tiger, roaming in search of babies to devour (see p. 124).

IDEAL AND IDENTIFICATION

The main factor in the development of the child's social relationships, starting in the family, is his formation of an ideal. The mother may become the symbol of goodness and beauty, and the father the symbol of wisdom and force. The child forms his first table of values with regard to these representations of father and mother, and he may establish his other social relationships according to this pattern. We give some examples (V.C.):

HUGH: "You are a bad boy, my mother will shoot you."
BEN: "I don't think so, mothers are always good."
(On another day, in the playground:)
HUGH: "Now I'm going to milk my cow. Get out of the way, everybody. Get out of the way, Ben."
BEN (teasing, dancing about): "No, I'm going to unlock it. I'm going to unlock it."
HUGH (patiently): "No, Ben, you don't have to unlock it. You just pull it and milk comes out. Milk comes out of all cows."
BEN: "Why?"
HUGH: "Oh, it does. Just like it comes out of your mother."
BEN (outraged): "Milk does NOT come out of all mothers!"
HUGH (hotly): "It does so—it comes out of all mothers."
BEN: "It does not. I didn't see it. And I'll tell my mother and she'll say you're a bad boy."

The child is often very disturbed by the mother's transformation during pregnancy. The ideal of the beautiful mother seems to be suddenly distorted.

The boy will very soon follow the pattern set by his father. He wishes to be strong and rejects all attributes considered to be sissy.

FRED (to observer): "Oh, you are a cute girl."
OBSERVER: "Thank you, you are kind of cute too."
SIDNEY: "Who is cute?"

OBSERVER: "Oh, both you and Fred."
SIDNEY: "I am not cute, I wouldn't want to be cute. I am funny-looking."
FRED: "But I am not cute. I am fat."

The formation of an ideal is based upon the child's tendency to imitation, whereby the child tries to adjust himself to his environment. Experiencing that he is not able to have the same power and success as those people whom the child wishes to imitate, these persons become ideals. The child's imitation is linked up with his power of identification. The young child, fusing his personality with the world surrounding him, may identify himself not only with other persons but also with animals or objects. The ideal may sometimes be an animal or an object. We shall later present the case of a child who substituted for the ideal figure of her mother the ideal of a cat (see p. 116). The degree of the child's identification is very different from that of the adult; we demonstrate this characteristic by several examples.

Foster Curtis reports of a little girl:* "As I was putting alcohol on X.'s legs for mosquito-bites, she flinched and asked soberly: 'Is alcohol alive?' 'Why do you think it may be alive?' 'Because it bites you so!' " For the Scupins' little boy,(509) † who loved to peel boiled potatoes, the potatoes were "little naked things." And Hug-Hellmuth(287) ‡ cites the case of a 3-year-old boy who, digging up cabbage turnips cried out: "Those that have dirty faces [show bad spots] I shall place with the popo [the stalk end] up."

For most children, when beginning to write, letters and numbers are seen as individuals. The numbers are described by the children as "rushing along, walking slowly, with a big head, saying good morning to each other," etc.

To the child, animals are not essentially different from human beings. Gordon, when asked whether he wanted to have a baby sister or a baby brother, answered: "A dog would do it, the other takes too long."

"These turkeys talk German," said a child, amazed when he heard the noise the animals made, and he wanted to take a turkey feather home, plant it, and make a feather-tree.

The child's identification with animals is more than a play activity. He identifies himself emotionally with animals, each of which seems to represent a certain trend in the child. An aggressive child feels like a "tiger waiting to eat people." One little boy said: "Let me say a secret. Now I am a little shiny fat, soft mousie, all gray, snoring to sleep." This child tries to feel with the worm. "What does it feel to be like a worm? Does it feel wet? He feels wet and cold, maybe he is, shall I put him on the radiator?" (V.C.)

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* P. 33.
† P. 80.
‡ Op. cit., p. 67.

The child who feels sympathy with the worm manifests a social behavior, even if his relationships to other human beings are not manifest.

Objects are personified by the child, and the child may react toward them in a social or in an unsocial manner. Clarence makes of his doll an object of his aggression: "I'm picking at her—I'm gonna break her when I get up. I know what I'm gonna do with this baby. Step on her and break her. See, she's suckin' her thumb. I'm not." Other children make the doll into an object of their love.

ISOLATION AND THE CONCEPT OF POSSESSION

Every child goes through a stage of isolation and monologous behavior, but the degree of this isolation varies with different children. Tendencies to "introversion" and to "extroversion" appear as early as the preschool age. The introvert child is absorbed in his own fantasies, withdraws from social contacts, and is generally self-conscious. The extravert child is more talkative, more busy with activities, and eager for social contacts. L. Marston(397) found with a hundred children between the ages of 2 and 6 that children are rather consistent in so-called "introvert" or "extravert" reactions to different situations. However, the personality of the young child is in a state of fluctuation. The present author agrees with the statement of the Murphys:(426) *

> In spite of all the research which has been carried out already, we certainly do not as yet have clear-cut evidence of stable general underlying factors, such as extroversion, which are manifested in every aspect of a child's behavior. Nevertheless, the net effect of all these data is to suggest that even in the preschool period the child has "personality."

The stage of isolation prepares the development of the child's individuality and the emergence of his self. Since the child deals with objects of his environment as with parts of his personality, he isolates not only himself but also certain objects from the environment. With the isolation of objects there starts the concept of property. Jersild remarks:(300) †

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* P. 333.
† P. 159.

There seems to be only a difference in degree between the behavior of a two-year-old child who insists that he, and he alone, be permitted to use a particular spoon and the adult who jealously guards his stocks and bonds.

The concept of property, developed in the stage of isolation, is not only based upon an attachment to certain objects and is not only to be explained by an acquisitive instinct, although both are influencing factors. Property becomes a symbol of power invested in the personality and is used for the goal of differentiating the individual from his environment. The concept of property is an important step in the crystallization of the self. This need of gradually limiting the personality from its fusion with the world appears, as we shall discuss later (p. 209), in children's expressive behavior as when, for instance, they surround their drawings by a circle, or build a fence around their playground, or desire a screen or other enclosures when sleeping.

A child isolating himself from a group might be compared with an adult taking a walk alone to find himself. The adult, who possesses a suit, a toothbrush, and a watch, would not be called egocentric if he refused to share these objects with somebody else. Similarly, it need not be considered egocentric if a young child will not let others play with a certain toy or if he keeps certain things exclusively for himself.

The following playground observations demonstrate different reactions toward "property" and the sudden change of dynamics in the relationship of preschool children to each other (V.C.).

PERCY: "Floyd, Curt has your train."

FLOYD (turns around, addresses Percy): "You must always tell him he can't have it when I'm playing with it. [Goes back to his building, finishes road, takes train which Curt has abandoned, and pushes it along road.] Let the *train* have the car . . . has to pull the car. Has to carry it [putting small car on top of train]. [Turns to Percy.] *You* can have it now, the car. You have this car, yes?"

PERCY (takes the car, says to Curt): "Want me to go in the toy shed and get you car?"

CURT: "Yes." [Percy runs off.]

PERCY [comes back]: "Here's a car, Floyd." [Percy gives Curt a car.]

CURT: "Nobody can have my car . . . nobody can't have my car 'cause it's just for me and her . . . that girl [touching student who is sitting on edge of sandbox behind him; although up to that point he had not seemed to be aware of her presence]."

(Herbert comes over, makes a dive for Curt's sand toy. Curt brushes him aside and goes on playing.)

HERBERT: "But my mommy said I can have something if I want. . . . B-b-b-but my father TOLD me so. . . . B-b-b-because . . . the mailman told my mommy so."

(Percy, Curt, and Floyd go on with their own sand play, completely ignoring Herbert.)

HERBERT (changes tone, pleadingly to Curt): "May I have this? . . . 'cause I don't have a train."

(Curt ignores plea. Herbert dives for his toy. Curt defends—brief vigorous scuffle.)

(Floyd wrapped up in his own play, pushing train around road. Herbert throws sand at Curt after a second's lull in the fighting.)

HERBERT: "I just do that to BAD boys! [Turns around and dives for Floyd's train.] I want Floyd's train!"

CURT: "You can't have it!"

HERBERT: "I have to . . . 'cause I don't have any train."

FLOYD: "You can have this one right there [perfectly serious about this, as he points to empty edge of sandbox]."

HERBERT (indignantly): "That's not a *train!* That's part of the sandbox. . . . [As Floyd is silent, Herbert stumbles on.] It doesn't move [rather lamely] . . . it isn't any . . . it's part of the sandbox [five times]."

FLOYD (waits until tirade is over, says quietly): "I won't give you the train."

HERBERT: "I want it!" [Plus a lot more of the same.]

FLOYD: "That!" [Points to edge of sandbox again.]

HERBERT: "That's *not!* That's part of the *sandbox!* [Working up into a fury.] I'm going to throw sand in your front eyes!"

(Martin gets into the sandbox and takes up idea of throwing sand at Floyd with gleeful smile.)

(Floyd tries to protect his face with hands and arms. Makes no sound.)

HERBERT: "I'll throw all the sand in your eyes!"

PERCY (joins in): "I'll hurt his hat!" [Pours sand on Floyd's head. Throws handful right into Floyd's face. Observer intervenes.]

The child who possesses the car has a feeling for his property just as the adult has; he is willing to share it with others spontaneously, but not if the other child demands it. Our record shows furthermore the mechanism of transfer in social feeling. Percy, who denounced Curt for having taken Floyd's property, suddenly changes his attitude toward Curt when Floyd gives Percy an example of sociability. Now Percy offers Curt his help, bringing him a train from the toy shed. The social reaction also affects Curt, who, previously playing alone, now shares his property with "that girl," the student. The social relationships, now balanced, are suddenly destroyed by the arrival of Herbert, who wishes to have what he wants. Each child not only protects his own property but also protects the property of the social group formerly established. When a battle begins between the intruder, Herbert, and the refusing Floyd, Floyd's former friend, Percy, takes part against Floyd, demonstrating how affection suddenly may be replaced by aggression.

DOMINANCE AND SUBMISSION

The first activities of the young child are monologous activities. The child plays for himself, manipulating objects, establishing relationships, and exploring his own reactions. As the following record shows, the child is conscious of his own weakness in relation to the adults (V.C.).

ERIC: "Hello, Mrs. Busy."
OBSERVER: "Hello, why Mrs. Busy?"
ERIC: "I'm Mr. Busy, 'cause we do so much work around here. You're bigger than I am. I'm big when I stand up, but I'm little when I'm on the toilet. You could step on me. Step on me right here [carefully pointing to particular spot on abdomen]."
OBSERVER: "No, that might hurt you."
ERIC: "Take your shoes off and step on me—right here."
OBSERVER: "No, I think not."
ERIC: "Then I won't like you any more."

Thus the child in an almost masochistic way experiences his own inferiority.

In his monologous play the child dreams of his power:

PETER: "I killed an elephant as big as this building . . . and my father couldn't carry it into the house. I killed a big bear too. Do bears have meat?"
OBSERVER: "Yes."
PETER: "Well, I ate a lot of bear meat, then.—I killed it, but I

couldn't cut it up, because it was too big. We ate it outdoors in the yard.—Out in the woods . . . got lots of animals out in the woods. You know, I could shoot anything that comes in my way. We gotta ghost out there too. You know, up in—there's woods all around, and when I go up this summer, I'm going out and hunt things. Great big [stretching his arms] lions and tigers . . . chickens and bears."

PERCY: "Did you REALLY?"
PETER: "Sure . . . I can do anything."

A play between two children is frequently a struggle for dominance (V.C.):

DONALD: "I'm gonna drive."
GORDON: "No, I'm gonna drive. You're the capt'n. You give orders."
DONALD: "Oh, I'm the captain, I give orders."
GORDON: "No, you have to get the orders first. This is the order."
DONALD: "Oh."
GORDON: "I hafta put the orders on. I hafta YELL the order. On the ship!"
DONALD: "I gonna get on and drive."
GORDON: "No! I drive!"
DONALD: "I drive too."
GORDON: "I'm the capt'n."
DONALD: "I'm the driver too——"

(Gordon moves a chair into Donald's driving place and sits down.)

DONALD: "Hey, that's my place!"
GORDON: "No, I brought my chair. I got here first."
DONALD: "I'm makin' a little cabin by the top."
GORDON: "I'll help you make one, shall I?"
DONALD: "Yeah . . . I'm the capt'n, I'm the man that drives."
GORDON: "I am too. I'm the head capt'n.—Get the guns—O.K.?"
DONALD: "These are just guns. Brrr."
GORDON: "This is the life saver. Yeah. I'm upstairs. I drive."
DONALD: "We're comin' into the dock."
GORDON: "And there's a big whale. I hafta get the guns out."
DONALD: "We're sinkin'. Get in the life saver. We're safe.—We're safe.—We're safe.—We're safe.—We're safe."

The play demonstrates how Gordon with diplomacy and action acquires dominance over Donald; he offers him first the rank of a captain, then takes his rank away, blocks him with a chair, frightens him with guns, and finally is the great hunter while Donald gives up, feels himself "sinking," and cries for the life saver with only the idea of being safe.

To be the "driver" means in the very sense of the word to drive and not to be driven (V.C.):

HERBERT: "Let's change."
GORDON: "No, I want to still be driver."
HERBERT: "I was the fire chief, you could be fire chief and I could be driver."
GORDON (stoutly): "No, I'm the driver."
HERBERT (resigned): "Well, if you're the driver we'll both be drivers." [Herbert grabs wagon and starts to pull. Henry stands up for himself, advances on Herbert with menacing crouch, fist raised. Herbert draws back, frightened.]
GORDON (swelling visibly with success): "I AM the driver." ✓

The friendship between two little boys may be formed by aggression and submission (V.C.):

HENRY: "We're gonna keep the door shut."
PHILIP: "We don't wanna play with Ernest, do we?"
HENRY: "No, but you let *me* say." [Runs over to glide, props ladder at bottom of slide. Philip followed slowly, a little absently. Starts to mount steps.]
HENRY: "Philip—*Philip.*"
PHILIP: "What?"
HENRY: "I have to go first [pushes Philip aside]."
PHILIP: "O.K."
HENRY: "I can beat Philip." [Philip starts to walk up the slide from the bottom.]
HENRY: "Don't go yet, Philip, you bad, stop that, you bad boy."
PHILIP (mildly): "Can't I go first?"
HENRY (climbing up): "I beat Philip, I beat Philip. I'm higher than Philip, higher than Mark, higher than Miss X. Stand over here, Miss X. Look, I'm higher than you."
PHILIP (stumbling up steps): "So am I."
HENRY (cocky): "But I'm highest. [Philip follows Henry.] Don't come on my side, Philip. I want this alone. Besides, I have a cold."
PHILIP: *"What?"*
HENRY: "I have a cold—a bad cold. You'd better not come near me or you'll get it. I guess you'd better play somewhere else [pompous and pedantic]."

PHILIP: "Well, you know what? I like to do things just like you. So let's not play here if we can't have the same thing—if you have a cold."

The dominant and submissive types of personality are formed with the child's first social relationships. M. A. McLaughlin,(411) trying to trace the origin of dominant or "ascendant" and submissive behavior in adults, found that submissiveness is associated with physical defects, emotional difficulties, unfavorable home situations, and real or imagined failures in life. Ascendance is related to superior physical and mental ability, early assumptions of responsibility, favorable home situations, and frequent social contacts. According to McLaughlin, submissive personalities can be influenced and transformed more easily than ascendant ones. H. H. Anderson(21) recorded the social contacts of preschool and kindergarten children with each other in terms of dominative and socially integrative behavior. He states:*

> In an experimental play situation these children had demonstrated consistently that dominative behavior in one child tended to incite dominative behavior in his companion, and socially integrative behavior tended to elicit socially integrative behavior in the companion.

Anderson found furthermore that "the behavior of the teacher is related to the behavior of the child." In his survey,

> . . . among the contacts initiated by the teacher, two out of three were dominative; . . . on the other hand, among teacher contacts which resulted from the child's initiative, six out of seven were integrative.

The expression of ascendance and submission depends very much on the given situation, and its degree can be detected only by a full analysis of personality. Characteristics of leadership and subordination develop earlier if the child grows up in a group. In children's games and group plays it often becomes apparent how these characteristics grow out of the situation. An experimental study by L. M. Terman,(558) investigating the originality of children's replies to certain questions, indicated that a child who is unusual in positive or negative behavior is more likely to play a leading role than the "average" child. According to a study by L. S. Hollingworth,(279) the leading child is likely to be more intelligent than the average of his group, but if he excels the average considerably he is not recognized as a leader.

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* Pp. 153 ff.

GENUINE SOCIAL RELATIONSHIPS

Many studies have been made on the social development of children. Murphy and Newcomb(426) list in their bibliography over eleven hundred titles on this subject.

The awakening of genuine social relationship is a rather slow process and may be interrupted by complete relapses into the monologous attitude. Neither when observing the monologous behavior of a young child nor when observing his social behavior can we conclude that he is in the "monologous" or in the "dialogous" state. Both processes are in a continuous fluctuation before the self is centered. A similar fluctuation appears with expressions of aggression and sympathy. Two children who have just demonstrated behavior of dominance and submission suddenly show behavior of mutual understanding; the attitude of dominance changes to that of sympathy. When taking off his coat, Henry calls Philip (V.C.).

HENRY: "Philip, help me. [Philip pulls one sleeve of coat, helps Henry get it off. Henry, with glee, calls the observer's attention.] Philip helped me with my sleeve. [Some minutes later.] You coming with me to help, Miss X.? Who stays there to help those children? [Rushes over to Philip officiously.] Look, Philip, your train is in two pieces."

(Benevolently puts Philip's train together, although Philip does not want it that way.)

Now these children provoke mutual help and collaboration in different activities:

PHILIP: "Oh, I dropped my stick."

HENRY (retrieving it clumsily): "I picked up your stick for you. Wasn't that nice of me, Philip? Wasn't that nice? [Pause—working at clay.] We won't stop this all day—we'll just stay here. We'll be here all the time—all alone. The grownups will be dead. We'll hurt them dead and they won't be here. We'll be playing with the dumb-waiter all the time. I pull it up and you pull it down."

In the beginning state, social relationships are partly determined by a genuine feeling of sympathy, partly by the child's struggle for superiority, and partly by resentment which appears especially against the adults. Social relationships begin when the affection of one child for another leads him to offer his services (V.C.):

HERBERT: "Look, Alice, what happened to the dolly here. Oh dear me, the bed's messed up; we've got to fix it, haven't we?"
ALICE: "I don't want to."
HERBERT: "Do you want me to fix it?"
(Alice runs away, not interested.)
HERBERT: "I like Alice, I love Alice."

PETER: "Anybody want to come in the box with me?"
BETTY (enthusiastic): "Yes, I do. I'm going in Peter's house."
PETER: "You can have that house all yourself."
BETTY: "But I don't want it by myself."
PETER: "But it's nice and shady."
BETTY: "I'm going to get in the bigger house."
PETER: "I'm going to turn mine up like this. . . ."
(Betty pushed Peter playfully.)
PETER: "Don't push me any more."
BETTY: "Oh yes, I will."
PETER (fiercely): "Cut that out."
BETTY (for no apparent reason): "Peter is very good."

CHILD-ADULT RELATIONSHIP

When the adult appears as the child's friend he may lead him through the complications of social relationship, helping the child to build up his self. The child's self is built up in a healthier way if it is not based upon the assumption that the adults are possessors of an ultimate truth. The child's recognition that the adult, too, makes mistakes gives him more trust in himself, showing that the gap between the young child and the adult is not without a bridge.

The following report illustrates a situation in which the child is right—against the adult. It is one of the situations which may awaken the child from his diffuse state of mind, from which the self might liberate itself (V.C.).

Austin brought a gun to school yesterday, which was very much admired by all the children. Today Gordon brought an identical gun, which the teachers thought was Austin's. He claimed it as his when Austin picked it up, and the two got into a violent altercation. The teachers, in their misguided judgment, were sure the gun belonged to Austin, and tried to separate Gordon from it, telling him the gun was not his. He became more and more intense and defiant, clinging to the gun. Miss V. removed it from him, explaining that she would ask his mother to buy him a gun, that Austin had brought it from home and would have to take it home again. Gordon became more and more infuriated, throwing himself on the ground, kicking and screaming and saying over and over: "It's my gun!" He grabbed it and pounded it violently on the ground, breaking it. Miss V. picked him up, said again it was Austin's gun, that kicking and screaming would not make it his, that holding on to it wouldn't make it his, that hitting Miss V. wouldn't make it his, that she would ask his mother to buy him a gun, and what kind of gun would he like to have.

After a few minutes he quieted down, and said he wanted a gun "just like that one with a brown handle."

He had been crying, big tears rolled down his cheeks, but when he stopped, he finally said: "That's—not—my—gun." Fred had been hovering near, very sympathetic with Gordon. Most of the children had sympathized with Austin, and had gone off saying "Cry baby!" to Gordon.

When the question of ownership had been settled, Austin dropped it, and both boys left it lying on the grass. The gun was not mentioned again until the end of rest. Gordon woke up saying, "It's—not—my—gun."

Since Gordon was not taken home by his mother, Miss V. called her at her office and blandly asked her whether Gordon had ever had a gun. She said, "Why yes, he brought one to school this morning." Then she described it as brown, with a black barrel, that made clicking noises, bought at Kresge's for 25 or 50 cents—which was just where Austin's mother had bought Austin's. She said she would be glad to buy him another one today and bring it home to him, but she wanted him to know that the gun at school had actually been his own. Miss V. agreed that that was the only solution, and asked her to tell Gordon that she had been mistaken.

The next day Gordon said that whenever he wants a new gun he will break the old one and have Miss V. call his mother and tell her to buy him a new one.

An experience such as this may have a decisive influence upon the personality development.

A general observation of our data regarding the social activity of the child leads us to say that the social activity appears in relation to the child's building up of his self. Several investigators, such as R. E. Arrington(36) and M. A. Barker,(43) suggest an increase of social activity with age. M. B. Parten(449) found that independent play decreases and leadership behavior increases with age. M. S. Fisher,(185) observing the language patterns of preschool children of from 2 to 5 years, found a high proportion of children's remarks made about themselves. However, with the ages from 2 to 4 there was an increase in the number of remarks about other people. Growing up, the children gradually use more frequently the plural personal pronouns, "we," "our," and "us."

All these observations suggest that with the development of the self the child gradually becomes aware of his membership in a larger group. However, throughout all preschool years the child speaks most frequently about his own person. M. S. Fisher concludes that the child is a "confirmed egotist," though he is very sociable; however, the child is an egotist without being conscious of his ego.

SOCIAL RELATIONSHIPS IN CHILDHOOD AND ADULTHOOD

There is a basic difference between the social relationships of the adult and those of the young child. It is a difference in perceiving society as well as in expressing social relationships. For the adult, society consists only of human beings. The child, who personifies objects, plants, and animals, lives in a much larger but much less differentiated society. The social relationships of adults consist of an interchange of stimuli and responses. Since the child's self has not yet crystallized, he has not yet developed a definite relationship between his individuality and his environment. He does not feel himself confronted by an environment but confounded with it. Hence, even if the child realizes the existence of other persons and objects, he does not acknowledge that these objects and persons have a structure independent of himself. He perceives his environment almost as parts of himself and lives thus in a monologous way. He treats his friends not so much as companions but as protagonists of his own fantasies. The adult perceives society in a realistic way, while for the child imagination and reality are confounded. The child lives with imagined persons. Almost every child has imagined friends or animals, and the attempt to substitute them by real beings or objects is often unsuccessful. The social relationship of adults is directed toward personalities and not to outer attributes. For a child clothes, name, etc., form an inseparable part of a person. The child may immediately like or dislike a person if he likes or dislikes his clothes. He may hate him if the name of such a person—for instance, Wolf—evokes anxiety due to associations with fairy tales.

Not only the perception but also the expression of social relationships is different in child and in adult. The adult's ways of expressing love or hate are limited by certain conventional standards. The child's symbolic language in expressing his social attitude is much wider and less differentiated. The child may express negative social relationships by tantrums, breaking his toys, bad eating habits, uncleanliness, bed-wetting, etc. Positive social relationships also may appear not in a direct but in an indirect way, in a reversal of all the items enumerated for the negative relationships. In positive as well as in negative social relationships the child lives in a world of substitutes which may either reflect his direct attitude or be a compensation for it. Loving or hating his doll may directly reflect loving or hating an adult. On the other hand, loving the doll may be a compensation for hating an adult.

The child's social world of human beings is very limited, while that of the adult is formed by a great variety of relationships. The social world of the young child consists basically of his family. It was found that the worst war experiences of British children had a less negative effect upon their personality than the evacuation to safe places by separating them from their families.(200, 201) The relationship to father, mother, and siblings patterns the child's emotional concepts. The father usually represents knowledge and power, while the mother usually represents protection. The relationship to father and mother also patterns the child's ideals. Different religions show us that the concept of God has developed from that of the father (Pater noster) and that female divinities, like the Virgin Mary, are patterned after the image of the mother. Politically, dictators often take over the fatherly role. Hence, the first family relationships may form a foundation for the individual's later attitudes in life. The emotional and intellectual influences of the family lead the child either to imitation or to resentment. Unhappiness in this first social environment may lead to the building up of a private world. A child may build up the idea of having been kidnapped by his parents, and that he would have been a prince with his real parents. Thus the child's imagination generally represents a wish-fulfillment for unsatisfied needs in his present social environment. One reason for the child's unhappiness may be an interference in his relationship to one parent by the other parent. If the father comes home and takes the mother away he appears as an intruder, whereas if he occupies himself immediately with the child, his sudden appearance may be celebrated as a great event. Siblings form the child's secondary environment. They may be hated because their presence diminishes the parents' care for one child; or they may be loved as objects of projection.

The development of social relationships goes through several stages, which do not always appear in a definite succession but the different manifestations of which can always be recognized.

The first phase is the child's monologous stage. Here the child lives as a self-sufficient unity, not being dependent on positive or negative attitudes of his environment.

The second phase is that of a discharge. It appears especially as aggression but is not necessarily directed against any specific persons.

The third phase is that of identification. The child expands his personality by identifying himself with his environment.

The fourth phase is that of the establishment of ideals. Certain figures and objects are more and more separated from the diffuse environmental background and become models which the child likes to follow.

The fifth phase is that of possession. The concept of possession demands differentiation—a differentiation between objects, between child and object, and between the child and other persons who do not possess the same object.

The sixth phase is that of competition. The process of differentiation has developed. The child realizes the difference between his own individuality and that of another child with whom he gets into competition.

The seventh phase is that of directed love and aggression. The emotions are no longer a mere discharge but are intentionally directed toward a certain person. In this stage the emotions do not demand a reciprocal attitude. They follow the motto which Goethe put in the words, "What matter to you if I love you!"

The eighth phase is that in which emotion demands a reciprocal action of love and aggression.

The ninth phase is that of altruism, which appears as help, assistance, offering presents, making sacrifices.

The tenth phase is that of cooperation. The child is aware of the relationships between himself and other persons. He begins to distinguish between cause and effect. He begins to realize the characteristics of another individuality. It is a phase which ultimately leads to the crystallization of the self.

Hence, there is a general difference between the social relationships of the adult and of the child, and a specific difference in the several stages of the child's development. In each stage the adult's approach to the child must be different.

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(see Chapter II, aggression, resistance).

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239, 354, 358, 426.

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21, 22, 23, 137, 296, 411, 445, 449, 450, 469, 558,

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8, 98, 118, 208, 217, 247, 312, 358, 383, 385, 493, 525, 541, 557, 593, 594, 620.

Delinquency

54, 109, 448, 613.

Chapter IV

THE CHILD'S CONCEPT OF REALITY

Space, Time, and Differentiation

The reality of the child is different from that in which the adult lives. Reality implies a definite concept of space. The spatial concept of the adult is conditioned by his long experience in perceiving and representing things; for instance, in a human figure he sees and would draw the head above and the legs below. For the young child the constancy of position is not yet developed. As experiments have shown, he may perceive equally well objects in an inverse position and draw them that way.

Reality means a definite concept of time. The adult has a definite feeling for present, past, and future. The child has not yet had enough experience to establish a past and to visualize a future, and his present is different from that of the adult since it is mingled with his imagination.

Reality means a definite concept of relationships. The adult conceives reality as a specific order and configuration of objects, situations, and persons. The child has not yet established definite relationships.

For the adult reality means a specialization of functions, actions, and reactions. If he does certain things, he cannot do others, and he has to act in successive steps. The world of the young child is not yet specialized, it is still an undifferentiated unity. If the infant wants to get an object, he grasps with hands and feet, with the unity of his entire body. Even the nursery school child still speaks with his entire body.

For the adult reality means the confrontation of the individual with the environment. The young child's personality is not yet separated from the environment. He projects his own personality upon objects, and objects reflect their structure upon him. He does not yet conceive the difference between male and female, between human beings and animals, animals and plants, plants and objects.

For the adult reality means a separation between daily experience and dream, between perception by the senses and by the imagination. For the young child reality and dream, perception and imagination form almost a unit.

For the adult reality means the sum of his own experiences and of the experiences of others, which have been proved. Reality means simply what is possible in the world we live in. For the child all is possible, there are no limits to real experiences.

For the adult reality means a scheme of events related to each other by cause and effect. His world is determined by the words "because" and "in order to." The young child does not realize causal or final relationships. His only interpretation is that things happen to appear together; he does not realize whether they necessarily belong to each other or not. The cup from which the mother drinks is a "mother-cup," and this "togetherness" seems to the child to be necessity.

For the adult reality means a definition of the qualities of objects. A chair is only an object serving the purpose of a seat. For the child a chair may function as a dog, as a car, or what not.

What is our attitude toward the child's reality? On the one hand, his reality is so different from ours that we cannot make an approach to it from our viewpoints. On the other hand, we have to protect him from too many disappointments in the adult's reality. What should be our attitude toward the child's imagination? Should we break this imagination by correcting it in terms of our reality? Should we give him occasion to live his reality by giving him fairy tales and explanations that fit into his world? If the child asks for an explanation of birth, should we give him a realistic interpretation? And if he asks about death, should we use religious concepts?

A realistic approach would not fit into the different world concept of the child, who cannot integrate many items of knowledge. A complete support of the child's world conception, however, would bring him into conflict with the reality of adults to which he has to become adjusted. It therefore seems that realistic approaches have to be made carefully and step by step. Forcing the adult's reality upon the child may bring psychic tensions, just as such tensions may later appear if a support of the child's imagination brings him into conflict with the adult's reality. The degree to which children enjoy fairy tales and "meaningless" nursery rhymes shows that the child has a need for discharge of his own imagination into such expressions. They should not be eliminated for the sake of an adult's realistic approach. If the child questions birth and death, certain realistic details may be given, but not so many that the child becomes more bewildered instead of less. Material which cannot be integrated provokes anxieties. Hence, the child's approaches to reality must be directed in terms of the child's total structure and not from the fixed viewpoint of the adult.

SELF-OBSERVATION

Searching for his self, the child discovers his outer features, he discovers that he has blood and organs in his body, he searches for his origin and his future, and with each discovery the child experiences not a single fact but a mystery of life with many connections.

Mirrors have an extreme attraction for little children. "Is it really me?" asked a little boy again and again, looking into the mirror, "I want to see me, I want to see everything in the world." The mirror leads the child to the first philosophical problem, namely, that of being confronted with himself; he realizes that he has to discover himself, and then the world by himself.

The child experiences his feeling inside, but he can't see it. The discrepancy between outside and inside, between what is manifest and what is hidden, and the impossibility of getting satisfactory answers from adults, becomes one root for the feeling of insecurity and of anxiety in children. Children try desperately to establish rules, and to explore reasons by ceaseless questioning. But most of these questions are of such a kind that the adult cannot answer them satisfactorily.

The child experiences his sensations and reactions, and we cannot explain to him why he perceives and why he feels things. The child observes his actions, and we cannot explain to him the scientific facts.

THE PROBLEM OF BIRTH

The child, trying to become familiar with the world, searches for the origin and aim of things, and very soon asks about his own origin. The following is a record taken by a mother of her 3½-year-old boy:

ANDREW: "Mommy, when I was inside you, you had to stay in bed all the time because you were sick—is that true?"

MOTHER: "Oh no, I was perfectly all right, I was up all the time."

ANDREW: "But could you walk too?"

MOTHER: "Certainly, I could walk and run too!"

ANDREW: "Is it true—or is it a joke?"

MOTHER: "It is true, Andrew. A woman with a baby inside her is perfectly normal; she is healthy and happy and she is doing the same things she always did."

ANDREW: "But I never saw a woman with a baby inside her!"

MOTHER: "Sure you did. Remember Anna? When she came to visit us with Frank she already had a baby inside her and she was quite healthy and was walking and doing lots of things, didn't she?"

ANDREW: "That's true. But then how can one know whether a woman has a baby inside her or not?"

MOTHER: "It is not very important to know that about any woman. If she is a friend of yours she'll tell you."

ANDREW: "Mommy, when I was inside you—what were you eating?"

MOTHER: "Anything I liked. I only drank a lot of milk because that was good for you."

ANDREW: "But did you drink coffee too?"

MOTHER: "Yes, I did."

ANDREW: "But you were crazy! Don't you know that coffee is bad for children?"

The next records were taken in a nursery school (V.C.):

ALICE: "You know where babies are in the hospital? In great big baskets. Maybe the nurses put them in there. Maybe they do. Nobody knows the things God does. Nobody, nobody."

ERIC: "I do."

ALICE: "You do not. You don't know how he makes people."

ERIC: "He made me."

IRVIN: "Do you know what my mother has inside of her?"

OBSERVER: "Could it be a baby brother or sister?"

IRVIN: "Yes. . . . Mother told me. She told me a long time ago, she has it inside of her. . . . Daddy doesn't know anything about it. He won't know until it comes——

"I hope it's a baby brother. I've wanted a baby brother to play with ever since I was a baby. I won't like it if it's a baby sister. I won't play with her."

OBSERVER: "It would be nice for your mother and daddy to have both a little boy and a little girl."

IRVIN: "Well, maybe I'll play with her but not until after a long time. Maybe mother has two babies inside her, a boy and a girl, or two boys, or maybe even three boys and three girls. Then we would have a big family and we'd have to build a bigger house or have a whole apartment."

BEN: "Edna [sister] said, the mommies have to be the ones to have the children.—Why couldn't I? . . . It would be nice if one person could do it all. If you could be a man and still have the children."
OBSERVER: "Why?"
BEN: "Then it would all be you. You could make up your mind without asking anybody."
OBSERVER: "Then you'd like to live all alone in the world?"
BEN: "Yes, just me. Not anybody else.—I could take care of myself. I could talk to myself. If I was all by myself then there wouldn't be any bad people in the world." ✓

The child's search for his origin is the most important part of his inquiry about the world he lives in. The question of whence he came and how he was made is linked up with his questions about the structure and origin of everything. The drive for knowledge is proportionately much greater in the child than in the adult. Children want to know where speech comes from, where it is kept, how we make sounds, how people see, how they get sick, what happens to people while they are sick, what pain is, and so forth. The child compares his body to various animals and wonders why he is built differently, why a boy's body is different from that of a girl, and so on. Since the child identifies himself with the world around him, the problems about origin and structure of objects are his own problems, they are centered in the question about his own origin.

THE PROBLEM OF DEATH

In the same way that the child, searching for his self, questions where he came from, he also questions what will happen to him at the end. As is the case with the problem of birth, where we use a realistic or a fantastic approach, according to whether the child is of the more realistic or the more imaginative type, so we have two different kinds of approach to the problem of death. C. asks R. during dinner: "You know what people do when they die?—They dig a hole, put a box in, and put the dead people in it." Freddy said to his grandmother: "When you are dead we shall bury you, and then the trolley car will pass over you." But just as many children do not accept an explanation of birth, even if it is explained to them in a naturalistic way, and prefer to return to the more imaginative story of the stork, so many children do not like to consider realistically the problem of death but continue to consider it as a state of dreaming from which one can awake.(30) A boy whose father is abroad remarked: "When my father goes to heaven, then he comes back to us all the way round."

Another record on death (B.C.):

ANDREW: "Mommy, why did uncle die?"
MOTHER: "He died because he was old."
ANDREW: "But how could they know that he was dead?"
MOTHER: "The doctor came to see him and he knew he was dead because he was not feeling anything any more."
ANDREW: "And where is uncle now?"
MOTHER: "They took him to a beautiful park, in a cemetery, and he is there, having a good rest."
ANDREW: "Then we can go and see him."
MOTHER: "We can go to that park, but we cannot see him."
ANDREW: "Why?"
MOTHER: "Because dead persons are buried."
ANDREW: "Why are they buried?"
MOTHER: "So that they can rest quietly and nobody can disturb them."
ANDREW: "How are they buried?"
MOTHER: "They are put in a nice coffin, and then the coffin is put in a hole in the ground; then everything is covered again with the ground and on top we can plant beautiful flowers or grass."
ANDREW: "I would like to go and see the park some day."
MOTHER: "We will go if you want to."
ANDREW: "Mommy, does a dead person move?"
MOTHER: "No, a dead person looks as if he were asleep."
ANDREW: "But is a dead person breathing too?"
MOTHER: "No, a dead person doesn't breathe any more."
ANDREW: "But then it is completely different, because when one is asleep he is breathing, isn't he?"
MOTHER: "Yes, you are right, it is different."
ANDREW: "Mommy, do we all have to die?"
MOTHER: "Yes, we all have to die when we are very old."
ANDREW: "But I don't want to die. I don't want to!"

A child lives in a world of bewilderment. He tries desperately to understand what goes on around him. We must be careful in answering the child's questions. He is serious about them, and our answers are important to him. When a child asks questions pertaining to sex, birth, and death, many parents are inclined to tell the child fairy tales that may differ each time the child brings up the subject. This is very confusing for the child, and he is inclined to seek another source for his information. Such incidents are dangerous for the child's mental development. A child frustrated in his explorations of the mind may develop symptoms such as bedwetting, lying, and crankiness. The need for a mental discharge finds a substitute in an emotional discharge.

REALITY AND IMAGINATION

The adult's reality is based upon experiences, either his own or those of his fellow men, known to him directly or from oral or written reports. The child has not had such experiences, but for his lack of knowledge of reality he substitutes a very vivid imagination.

The life of the child consists for the most part of playing and dreaming. Since the child is not able and is not allowed to act as he would like to, he plays what he would like to do in reality. The question is: What is the child's own attitude toward his playing and dreaming? Some experts in child study, as Karl Bühler, consider the child's fantasies as make-believe. Bühler assumes that the child is always conscious of the unreality of his fantasies. Actually, children say very often: Let's pretend to be such and such an animal, or to do such and such a thing. A little boy tells the observer: "Know what I have? I have a big car. It's only a tree and I climb on it, but I pretend it is a car." However, the intensity of the game suggests that the child, during this act, identifies himself completely with the imagined situation. As suddenly as these imaginings appear, so suddenly they may disappear. Hilda and Mary play at being tigers. The lunch hour interrupts their play. When later Mary reminds Hilda: "Where are the tigers?" Hilda answers: "They are all melted to butter." * The make-believe attitude seems to be rather a transitory concession to the adults who are observing the child. On the other hand, many things which the children imagine they are doing have another significance to them than they have to the adult. If, for instance, a child says: "I shoot you," he may not realize what shooting means. The criterion of reality in terms of the child seems to be quite simple. For the child what he feels is real. If he actually feels what he imagines, this imagination is for him real. The organizing self not yet being established in the

* Cf. the book, *Little Black Sambo.*

child's psychic organism, he lives in a state of fluctuation without limits and fixations. The young child has not yet a definite time relation. Stern(539) quotes the following questions of his 4-year-old boy:* "Is today tomorrow? Is now today? . . . If we go home then it will be today. . . . We will pack today and start yesterday." The reality of the child is without connection to the dimensions of time. But also the relations to space are very unstable in the young child. Near and distant space, outside and inside, right and left, above and below, can, as is indicated especially clearly in children's drawings, not always be distinguished.

A main confusion in the world concept of the young child is that the facts he knows are isolated facts, not organized as to their proper content. The child tries to establish relationships between different things he has heard; he makes connections that appear to be illogical, but which are based upon logical deductions. A child who had heard that people are starving in Germany asked: "Where do people go when they die? To Germany?" Another child believes: "God has a jack-knife as big as the sky. He cuts people's throats with it." The reason is: "Because pictures have Jesus all bloody." (V.C.)

DISSOCIATION OF PERSONALITY

What we call imagination in the young child is different from the adult's imagination because of the degree of its intensity. Since the child continuously projects his inner life upon the objects surrounding him, reality and imagination are not sharply differentiated from each other. F. V. Markey(395) found that children 2½ years of age participate in imaginative situations on an average of six and one-half imaginative situations per two and one-half hours. According to a study of M. P. Bernham,† the remarks of 2-year-old children contained 1.5 per cent of imaginative situations; this percentage rose to 8.7 at about 4 years of age, and in some instances it was 26 per cent. The make-believe world which underlies all play activities of children may become stronger than reality. Children escape to a world of their own imagination in which everything happens according to their wishes.

In his imaginary world one boy gets rid of his older sister, against whom he feels strong trends of jealousy. He now has another sister who is smaller than his real sister. Now he lives in a big house—no longer in the small apartment in which he lives in reality. He can do what he wants, being without the interference of adults. Then the child plays at being another boy who now can praise himself through an imaginary companion: "You know that little boy who lives on Walnut Avenue? He is a nice little boy. My name is Carl Thomas. I'm just going to be here a little while." The phenomenon of imaginary companions, which occurs most frequently between the ages of 4 and 10, is similar to a hallucination and can hardly be destroyed by happenings in reality. A little boy played continuously with an imaginary donkey, tyrannizing his family because wherever they went, the little donkey was in the way. The parents bought the child a big toy donkey, whereupon the child exclaimed: "How happy my little donkey is to have a playmate!" Imaginary companions do not necessarily have permanent characteristics. Jersild and Holmes(302) found that only a third of the children they observed gave definite and permanent characteristics to their imaginary companions. Girls had imaginary boy companions more frequently than boys had girl companions. The imaginary companions are a manifestation of the child's "dissociation of personality," in which a centering self is not yet established.

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* P. 395.

† Quoted in 300

In some instances the dissociation of personality goes so far that the child does not always feel the unity of his own body. The observation that children in the first months of life often inflict wounds on themselves was interpreted by D. Tiedemann(571) and by W. Preyer(477) as a lack of thorough self-perception.

The child who experiences different moods feels like different persons. The same holds true for his other trends; if the child desires certain things he cannot get he escapes to a make-believe situation of being grown up; if he feels very insecure he imagines that he is an infant who is fondled. Thus the child's ego expands and shrinks, forming different personalities. In the period of expansion a boy says:* "I am tired of being a little boy. I am a big boy. Soon I will be a daddy." In the period of reduction: "Today I'm not gonna be big. I'm gonna be a little baby and you must take care of me. I can't do anything for myself. I can just lie in your lap. I'm tired of being a big boy for a while." When one is big, the child explains, "you can do what you want to do and nobody tells you and you don't have to ask." When one is little then one can also do what one wants because everybody cares for the little baby. Ben, hearing of soldiers who have to go to war and shoot people, feels the burden of being a grownup: "Sometimes I wish I didn't have to grow big, pretend I'm a little baby and have a long time to wait till I grow big."

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* C. S. Littledale: A Long Time A Growing Up. *Parents' Magazine,* February, 1943, p. 15. (A V.C. record.)

Our examples demonstrate two basic characteristics of the child's mental life: the confusion between reality and imagination and the dissociation of personality. Stern remarks in this respect: (539) *

> This mutual, intimate intermingling of reality and imagination is a fundamental fact, the full significance of which has only been recognized in the last ten years, and yet it is the source of the most important psychological knowledge of equal significance in the highest form of imagination as evidenced in art, and in the simplest in primitive man and in the little child.

However, we should not forget that the characteristics of the child's "reality" and "imagination" have a specific structure, as have all his other manifestations, such as "aggression," "affection," etc. If we use terms taken from a vocabulary with which we describe the adult's psychic structure to interpret the child's behavior we should always consider that the term has another meaning when applied to a child, where it refers to another level of the psychic structure.

DREAMS

Children's dreams, like those of adults, are mostly fantasies of wishes or fantasies of fears originating in frustrating experiences. If the child is not happy at home he escapes into the world of dreams, and such dreams are based upon wishes (V.C.).

OBSERVER: "What do you like to do best at home?"
HARRY: "Let's see . . . Oh, I don't like to do anything home. . . ."
OBSERVER: "Isn't there anything you like to do in your room?"
HARRY: "Yes—one thing. I like to play. I like to get up in the night time and play soldiers and cowboys.—In the night time we're going to see the big boats and the *Normandie* and the sailors and the soldiers and the captains and everything in the night time I'm going to my grandma's and my mommy and daddy are going to my aunts'—and then going in the morning to a football game. . . ." (542) †

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* P. 277
† P. 32.

A 4-year-old boy says (V.C.):

> I ride in the night sometimes. I ride in the very dark. I have a flashlight. Very fast. I ride in the very dark. When all the other children are asleep I stay up and ride in the night. Sometimes I ride on a bicycle and some days on an elephant like in my book and sometimes . . . I do ride in the dark night when children are sleeping—with my flashlight on.
>
> I go everywhere alone, to school, and I came here alone. I have no people that live with me. . . . I can eat alone and dress myself and I am not even afraid to be in the dark—asleep by myself.

Many children have dreams based upon fears. The terror dream seems to be a result of projections, feelings, and emotions which could not be discharged in daily life. The mother of the 3½-year-old boy referred to before recorded the following two dreams:

FIRST DREAM

> There was a woman who knocked me off the pillow. She was a woman who gave gifts to a man, the gifts were in little white boxes. The man was looking for a gift for his wife and the woman couldn't find the right one for that man. The man was always saying, "That's not right, that's not right." And the woman was always showing him other gifts and others and others. I was there on the floor and the woman knocked me off the pillow because, you know how it looks sometimes. And I called daddy and he ran into my room and then the woman disappeared, you know, she broke in little pieces, it looked like that, I think she went back to her room. But I was scared that she might be hiding inside my pillow.

To interpret this dream we must investigate the child's recent emotional experiences. The child had questioned his mother about birth previous to the dream (see p. 73); thus he had on his mind the problem of birth and the relationship of father, mother, and himself. The main scene is that a woman gives presents to a man which he does not like. To the child man and woman are representations of father and mother. The mother, whose characteristic it is to give presents to the father, knocks the dreamer off the pillow. The gift may easily be explained as the new baby, whose arrival would endanger the child's position in the family. The child appeals to his father, who is on the child's side, refusing the gift. Hence the dream expresses the child's fear that he will have to share with the new baby the affection that he now receives. He is afraid of becoming less important and less the center of the family.

SECOND DREAM

I was on the sidewalk in front of my house when a woman with an orange coat came. She was running backward, I really don't know how she could do that, and always running backward she ran over me, she didn't touch me, she just ran over me with her legs, and then she laughed. And then I saw two black bears, a daddy bear and a mummy bear, who were looking at us, they were very good animals and I loved them, and I was scared that the woman with the orange coat might run over them too. They were not real bears, you know, they were like shadows, you know, those shadows which come out of the walls when it is beginning to get dark; but they had real heads and eyes and legs.

The second dream appeared several months after the first one. The feeling of danger seems to have increased. The element of fear is stressed by the running backward, the black bears, and the shadows. The child was especially frightened by the fact that the woman was running backward. He cried, "I don't want to sleep any more in this bed because it is full of women. When I sleep I like to be quiet." The fear of a new birth, as expressed in the first dream, seems to be related to the fear of death, a problem which the child had recently discussed with his mother (see p. 73). The mother, he fears, may die like his uncle, running backward, away from the child. The mother plays a double role for the child; she is desired and feared at the same time.

Children live on the threshold of reality and dream. As C. W. Kimmins observed,(330) * "Young children have a great difficulty in separating the dreaming from the waking element." To children dreams are a kind of reality, since they cannot distinguish between the world without and the world within themselves.

THEORIES OF PLAY

Playing is the dominant factor in a child's life; however, the meaning of play is different for child and for adult. Many theories have been offered for an interpretation of the origin of play.

Schiller spoke of the play instinct as a special human gift, which he glorified: "Man is only man indeed when he plays." Here the artist identifies play with creative artistic activity, glorifying his own profession. However, the aesthetic playlike activity of the adult seems to be different from the serious identification in the play of the young child. Karl Groos(244) explained play as either a

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* P. 36.

means of discovery by experimentation or an expression of activities and impulses. Psychoanalysts interpret play as a symbolic expression of wishes and of actions which are prohibited to the child in reality. Alfred Adler sees in the child's play a satisfaction of a striving for power and superiority.

The main difficulty in interpreting the meaning of children's play seems to be that we cannot speak of the child's play in general. There are as many types of play and as many motivations of play activity as there are different actions of adults in their different motivations. On the other hand, it does seem to be possible to make tentative classifications of various groups of play, each of which, however, should be interpreted for each child in an individual way.

TOOLS AND IMAGINATION IN PLAY ACTIVITY

Among the different groups of play we have to distinguish play with given tools from that with imagined tools. Tools range from bottle tops, buttons, and sticks to building blocks, toys, dolls, and elaborate play material. The importance of elaborate play material for young children is often overestimated by adults. Since the young child is in a state of continuous projection, it does not make much difference whether his toy is a wooden stick or an artistic figure. Several studies have been made on the preferences for play material.(81) Building materials, especially blocks, modeling and painting material, are most popular.(582) This seems to indicate a preference for unpatterned raw material upon which the child can easily project his imagery. There appear some differences in the preferences of boys and of girls: mechanical toys are more preferred by boys; dolls, crayons, and scissors are more preferred by girls. However, it is difficult to differentiate here between innate and environmental influences. Play activities in which tools are imagined have psychologically wider implications, since the child is not limited or directed by the material. This imaginative play has its implication for the social, mental, and emotional development of the child.

The social influence of play is the development of leadership or subordination characteristics. Introvert or extravert tendencies are here in the making. Although solitary play is characteristic of the monologous stage, the child enjoys his play more if he occasionally can interchange ideas with other children. The degree of stimulation, cooperation, and discipline is decisive for the formation of personality.

The mental influence of play appears in its exploratory character. Many play activities are limitations of observations and experiences, stimulating the process of learning and helping the child in his search for facts. Sex play and father and mother play seem to be based more upon mental curiosity as to the secrets of the body than upon sexual impulses.

The emotional influence of play is generally disregarded, although it seems to be most important. The child discharges his emotions in play activities, he discharges aggression, fear, and tension, and in his make-believe patterns he discharges needs for protection, security, and dominance.

Play is the child's social, mental, and emotional ventilator; it is a bridge between reality and imagination and a rehearsal for the role the child wishes to assume in life.

THE SOCIAL INFLUENCE OF PLAY

During their play activity children establish social contacts and develop social relationships. A common projection of wishes and fears forms a bond in a group, out of which a leader gradually emerges.

The recording of collective plays is of special value in diagnosing the personalities of the various children, differentiating, as it does, the individual reactions to the same stimulus. One child, for instance, uses the whole play to acquire leadership of the group. Some children use the play to express their wish for submission; another group takes the playing only as play, as a means for entertainment, for which another might easily be substituted.

THE MENTAL INFLUENCE OF PLAY

It is characteristic of the play and games of older children that they contain, as Piaget remarks, (468) * "an extremely complex system of rules, that is to say, a code of laws, a jurisprudence of his own." For the young child just the opposite seems to be true. His game seems to be a projection of his dreams, and he uses his comrades as actors to play his dream. Characteristic of these play activities is the absence of any rules; they may change as rapidly as pictures in a dream, and they may involve just as incoherent elements as does a dream. While the play of the older child seems to be a training in the channeling of emotions by a system of laws, the play of the young child seems to be an attempt to seek goals for the discharge of emotions. This searching for goals builds up the mental world of the child. The play of the older child, for instance the game of

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* P. 1.

marbles, has an abstract character; if a young child plays with marbles he may use them for representing persons, animals, or objects. The abstract character emphasizes the rule, the concrete character emphasizes the content. The play of the young child has much more the character of a play in a theater; it is a rehearsal of life situations and of experiences to which an adjustment has not yet been accomplished. In this way the play of young children is an expression of their attempt to overcome the obstacles of reality; as a realization of their desires the play is, like a dream, a wish-fulfillment; and as a projection of their fears the play serves to overcome anxieties (V.C.).

BEN (in a low coy voice, to Irene): "Let's play die."
IRENE: "All right."

(Both run over to the box. Ben climbs up the inclined board on his hands and knees.)

BEN: "We're going to die up here."
IRENE (following): "Yes."
BEN (verbalizing all his movements): "Now we climb up here, down, over, up this side, now down here. We want to die up here."
IRENE: "Yes."
BEN: "We're going to die, and we'll cry."

(Ben lay very still on the bed. Irene imitated him, but did not enter wholeheartedly into the play. She went off to something else, and Ben gave up play too.)

The child's play of hiding, of "disappearing" and "reappearing," seems to have its emotional value in experiencing that if something disappears, it must not necessarily be lost but will reappear soon.

BEN (when hiding himself): "I'm disappearing. It's night; the middle of the night. I'm gonna disappear."

The fear of going to sleep which most children have seems to have one origin—an anxiety lest they disappear, since the young child has not yet acquired the security of his own self.

On the whole, the play of the preschool child is very different from that of the older child. For the little child the play is a vent to discharge energies, while for the older child the play, consisting of rigid rules, serves to channel energies into a system of fixed values. The play is also a repetition of observations and a rehearsal of behavior. The following is a record of a solitary play (V.C.):

HENRY (playing with dolls and doll carriage): "Put blankets over their heads to keep them warm. Now I'm the mother and I'll take them for a ride in their carriage [pushes doll carriage back and forth]. Now I turn around; have to be careful of buildings here. Watch out! We don't need lights on in here 'cause it's daylight. I'll shut all the doors so Philip can't get in. Maybe he wants to play with me. I s'pose he does. I wonder what he's doing outside. When will he be coming in? We need a nail in this wheel. My God, we really do need a nail. Two nails this carriage needs.—Philip is calling Harry outdoors. I'm going to look out [opens window and shouts:] Hey, Philip! Look at poor Philip out there. He probably misses me! He wants juice but I don't. My babies are resting. Now he isn't outside any more and I won't lose him. I have nothing to look at, have I . . . but this dumb little book, Three Bears. That's no good. I'm too hot by this old hot radiator. But I'm not going to move anyway."

The child re-enacts past observations with his baby brother, trying to understand the attitudes of his environment; at the same time he rehearses a future attitude toward his friend and imagines the friend's attitude toward him. The play is a complicated training of mental processes.

THE EMOTIONAL INFLUENCE OF PLAY

The emotional play of young children is somewhat similar to the dancing of primitive peoples, a kind of self-intoxication in which the creation possesses the creator. During a snake play some of the children were so frightened that they tried to escape but were unable to do so. One child stayed near the observer, pressing to her when danger threatened. Other children cringed and whined but were fascinated. Some children jumped up and down, squealing and clutching their pants. Others were giggling and leaping about happily. For most of the children, carried away by their emotions, imagination had become reality. The discharge of anxiety which took place in these collective emotions was experienced with greatest delight; the leader of the play was partly submerged by his own emotions, but partly able to direct the emotions of the group.

The play that children most prefer is being animals. The young child feels himself to be in an interim position. He belongs neither to the world of grownups nor to the world of babies. He feels himself to be an outsider, a species all by himself, as the animals are.

As one of a minority group, he makes friends with another minority group, the animals; and, knowing that animals may be dangerous and aggressive, he has in them a mighty ally against hostile adults. Thus Steve tells the observer:

STEVE: "At home we have elephants and two baby calves and a father bull and nineteen baby bulls and kangaroos and lierns [lions] to hurt everybody over here, and goats that would bite everybody . . . and another awful thing . . . a terrible thing that doesn't like anything but teachers and me, and just hates everybody and climb on top of the nursery school and break all the windows and eat everybody in the nursery school. The animals don't like anybody but me, I feed them grain. But one thing doesn't like even me. It's an old burglar; a police dog who always wears a hat. The police dog doesn't like anybody, even me. I ought to give him away to a policeman."

In order to become familiar with his allies, the child imitates their customs. Since the young child is in a continuous state of metamorphosis, the sudden change of his identification is very characteristic. In the following we give some records of animal play (V.C.):

WALTER (on the climbing apparatus): "I'm a monkey climbing up."

OBSERVER: "What does the monkey do when he gets to the top?"

WALTER: "This is a coconut tree. The monkey picks a coconut and throws it down. See! [He picks an imaginary nut and drops it, then points to where it has landed. He picks another coconut and drops it also. This action is repeated several times while he talks to himself.] The monkey picks another coconut. It makes a noise when it drops. [Ira joins him.] The monkey drops the coconuts into the farmer's truck down there. Do you see it? The farmer feels the coconuts. Monkeys won't eat coconuts. They eat peanuts. This is a peanut vine. [He continues climbing. At the top:] I am a cow in the sky. You are a cow, Ira."

IRA: "We are two cows."

WALTER: "Moo moo, I am chasing the chickens."

OBSERVER: "Where are you chasing the chickens, Walter?"

WALTER (pointing across the road): "Can't you see them over there? [Ira crawls down to help chase the chickens away.] The chickens are all gone. Now the cows can go back."

(Ben comes over to join them.)

WALTER: "You are a cow, Ben."
BEN: "No, I'm not."
IRA: "Yes, you're a cow."
OBSERVER: "What are *you,* Ben?"
BEN: "I'm a boy."
WALTER: "Yes, he's a boy. He came to see the cows in the sky."

BEN: "I'm not going to be an elephant."
OBSERVER: "You're not?"
BEN: "No, I'm going to be a boy."
(Some minutes later.)
BEN: "I'm an elephant."
OBSERVER (to Mary, who pretends to be a bear): "Could you be an elephant?"
MARY: "No."
OBSERVER: "Why not?"
MARY: "Because God didn't make little girls to have trunks."

Donald takes up armfuls of grass and carries them over to Harry, thus introducing the "horse play."

DONALD: "My sister swallows grass!"
HARRY (reacts bossily and turns from a horse into a farmer): "Hey, horsies, want to go for a ride today? Get in there and stay in there! And next time don't do that again. Go to bed, horsy. I'm going to bed too [stretching himself out]."
DONALD: "I'm a cow—they stay out in the field all night, even if they get rained on. Don't they? [To Harry:] Get up on top of the farmer's bed."
HARRY: "Horsies, don't do that! Get off my back!——"
DONALD: "I must be the bear and you be the horsies and I come and bite you! Here comes the big tiger!"

Animal play has partly the function of discharging emotions. As an animal, Ellen can offer her hated newborn sister as a "fat baby" to her tigers. Playing "wolves to eat people up," Donald discharges his aggressive feelings against the grownups, and Harry suggests that other children are "wild bad horsies," and he is the master with the whip. With animals the child can feel superior, thus balancing the inferiority feelings he has in the world of adults.

PLAY AS A TRAINING FOR EXPRESSIVENESS AND IMPRESSIONABILITY

As indicated by our records, the child's play is not only amusement. It is a main activity of the child and as serious for him as all the adult activities are for the adult. The attitude of the adult who belittles the child's play or considers the child happy because he plays most of the time is a fundamental mistake and shows that the child's structure is for most adults as incomprehensible as the animal mind and that the child's activities are as strange to the adult as the ceremonies of the wild savages of the Dark Continent are to civilized man. The child's play activities are as manifold as are the adult's occupations, and they have a similarly wide range of motivations.

For the child reality brings numberless frustrations, owing to the many prohibitions set up by the adults. Unsuccessful protests made to the world of the adults can successfully be realized in a world of their own, established by play. However, the child's drives are frustrated not only by inhibitions, but also by the pattern of life in which he is forced to deal with the adults. In this life all activities have a purpose. They are channeled by cause and goal. The joy in activities themselves, the joy in movements and fantasies which are purposeless, can be realized only in dreams or in play. While the adults have wide possibilities for self-expression by action and by identification (reading, theater, etc.), the child's self-expression is nourished from the outside world only to a limited degree; he has to get most of his material for self-expression out of himself, and he has to set his own stage to realize it, namely, in play. Specific motivations for emotional discharges are the child's fears, anxieties, and feelings of inferiority. While the adult gradually establishes a world of security, in which he knows what he can expect, the child, who has as yet had few experiences, notices changes, surprises, and instabilities in a much higher degree. In his play the child produces situations of his own imagining, and it is very characteristic that the main contents of children's plays are sudden changes and menacing situations. Producing and overcoming such changes and menaces, the child in his play trains himself to discharge his emotions without danger. Play as a world of his own gives the child the possibility of discharging freely his feeling of insecurity and of acquiring a feeling of security. Since during his early years the child is continuously confronted with new situations, he is in a continuous state of emotional tension which becomes manifest in overactivities. These overactivities again are mostly misinterpreted as a mere joy in movement. The accumulation of tension demands an outlet and relaxation which the child finds in his play.

Play as a mental discharge may have different motivations. A great part of reality is meaningless to the child, and play is an attempt to make the reality meaningful. The thinking of the adult is determined by his associations, which are connected with each other by the laws of cause and effect, and which are organized by the conceptions of time and space. The child has not yet developed an understanding of cause and effect and of time and space; therefore his associations are loosely connected with each other. The child experiences that certain things appear together, but he does not know why. Play appears to be an attempt to fill such gaps; here the child tries to establish the most varied connections. These connections which he makes by himself seem to be a mental discharge for the unsatisfying connections of reality. The child's struggle to find out about reality is also realized in his play activities. From the confusion between imaginative and realistic play the realistic features emerge more and more. The continuous changes in child play seem to be a training in the adjustment of themselves to the continuous changes in reality. All the unsatisfied mental needs of imagination, speculation, and inquiry find an outlet in play activities.

Play as social training becomes a reflection of the family relationship; the child's attitudes toward father, mother, and siblings are staged, trained, and corrected in play. Play offers freedom of responsibility and enables the child to try out his individuality in all directions. The feeling of insecurity which necessarily results from his lack of power and understanding can easily be compensated by play activities in which he possesses an imagined or a real power over his playmates. Play is the first attempt to establish social contacts and to realize the meaning of leadership and subordination. Play becomes a rehearsal for life activities, a pantomime of the child's wishes and duties.

Rules which gradually appear in the child's play reflect his first attempts at organization in the emotional, mental, and social fields. In all the different motivations, of which we have given only a few, play is a serious effort of the child to adjust to reality; it is one of the main steps in the child's search for his self. Play is a discharge of expression as well as a training in the understanding of impressions. It may have the imaginative character of a dream and the practical features of reality. Structurally, play is a bridge between dream and reality. It is the child's main contribution to guiding himself into the world, a most serious effort which uses up a great deal of his energies and which therefore should not be confounded with the play of the adult, which is usually a means of relaxation and amusement.

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30, 83, 259, 315, 398, 587.

PART II

EXPERIMENTATION

Chapter V

THE PRESCHOOL CHILD AS AN INDIVIDUAL

THE GROWTH OF INDIVIDUALITY

IN SPEAKING of the behavior of the child we must keep in mind that we speak only of the average reactions of children. Within the range of average reactions, however, there are as many individual deviations with children as there are with adults. A. Gesell goes so far as to say:(214) *

> It is permissible to speak of the individuality of the fetus, for even newborn infants display significant individual differences in their physiological processes, in their reactions to internal and extrinsic stimuli, in their patterns of feeding, sleeping, and waking activity, and in perceptivity.

Although the human structure follows in its development certain basic patterns which are characteristic of various stages of growth, individuality appears as early as the first breath of life. Individuality is given, but it is only slowly accepted; when it is accepted, the preschool age ends. Now it again takes some time until individuality is consciously directed. After the search for the self is completed, after individuality is recognized, there starts the process of individuation, ending when the search for the "I" becomes substituted by the search for the "You." Then childhood has ended.

The various stages in the development toward acceptance of the individuality may roughly be divided into the ages of from 1 to 5. At 1 year of age the child has his individuality "within" still fused with the environment without. At 2 years of age the child recognizes himself as being different from the environment, but this difference is, so to speak, perceived objectively; it is characteristic that the child at this age speaks of himself in the third person—"Tommy did it," or, "That's mummy's darling." At 3 years of age the child gets the feeling of personal identity. Now he starts to separate himself from the environment, it is the time of his monologous play, he starts mapping and naming the world. At 4 years of age the child establishes mental, emotional, and social relationships. It is the time of questioning, why and how and for what. At 5 years of age the child starts accepting his difference, his independence, his uniqueness, in short, his individuality. It is the time of self-reliance, self-sufficiency, up to resentment and a revolutionary attitude. The preschool age has ended. The many individual differences which each child has already displayed at birth are now integrated into the self. The mental, emotional, and social attitudes are unified.

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* P. 12.

There are wide individual differences in children's reactions to failure,(397)[*] to social contacts,(397)[†] to fear-provoking situations,(307)[‡] and there are also wide individual differences in self-expression.

TYPES OF ADJUSTMENT

The individuality of the young child becomes especially manifest if we observe different children in the same situation. Records on children's behavior should be a combination of three kinds: (1) the verbal record, using the child's own words as much as possible, (2) the descriptive record, describing the child's behavior and activities as objectively as possible, and (3) the interpretative record, relating different behavioral aspects to each other and explaining them. The three records should be made separately. We present in this book many verbal records and give a great number of examples of interpretation. The following are two descriptive records of two children, taken by the same observer, at the same nursery school, at the same time (B.C.):

Time:	Johnny (4 years of age)—*Observations:*
10:35 A.M.	He enjoys himself, playing alone on see-saw. His attention is drawn by children on wagon. He watches for a while and finally decides to take a ride. When children start to kick and fight, he gets off and watches quietly. When the children tumble off into a heap, he climbs on excitedly, yelling, "Fire! Fire!"
10:45 A.M.	He secures an unoccupied ladder and climbs on a fence con-

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[*] Pp. 62-65.

[†] Ibid., pp. 50-57.

[‡] Pp. 85-94, 1936.

tentedly. Is agreeable to the teacher's suggestion that he get down. Another boy noisily grasps the ladder, and Johnny disgustedly gives up; but he fights back when a boy unreasonably strikes him. He then plays in the sand, making "a cherry pie" for the teacher.

10:55 A.M. Gets in a big box to cry quietly at learning that there is no time for him to ride a bicycle. He says he wants to go home. Finally he takes the teacher's hand and goes submissively inside.

11:05 A.M. He stands quietly in the bathroom until everyone is through, then he washes. He regards the children placidly. He spends a long time washing and drying in order to do it well.

11:10 A.M. Goes into the dining room and takes a seat at a sparsely occupied table. Drinks all his juice quietly and sings his request for more. In the same manner he asks for another cracker.

11:15 A.M. Goes in to get his mat, dances around with it, and lays it down. Goes over to the piano and bangs contentedly until he is forced to stop. Hops around on one foot, smiling happily.

11:20 A.M. At the teacher's request he goes to the mat and lies down and placidly watches other children.

Johnny has a great deal of fun playing by himself. He does not give the appearance of being afraid of the other children; he seems to think them not worth bothering with. He appears continually happy and carefree.

There are other types of children who will participate in group activities only if they are leaders. Four-year-old Claire was one of these, as shown by the following observations of her.

Time: Claire—*Observations:*

10:35 A.M. Outside in playground: Climbing on everything in sight. Picks up all the sticks and stones, etc., on the ground. Watches all the children intently. Does not mix, but imitates children's actions.

10:45 A.M. Tries to draw attention to herself by standing in conspicuous and precarious places; obviously feels superior. Continuously moves away from the crowd and climbs along a narrow beam. Picks different objects off the ground and throws them aggressively into the sand box. Screams delightedly at herself. Returns to the group of children at the play bars. Gets bored.

11:00 A.M. Refuses to follow children to the house and also refuses to help put the playthings away. She regards the children intently and scowls. Sits down, talking pleasantly to herself. Sees other children going into the house, runs past them and hurries to the most comfortable chair and sits down to read aloud to herself.

11:10 A.M. Refuses to take off her coat and to wash as all other children are doing. Pretends that she is reading the words in the book in an endeavor to impress the children. She imitates the noises of the animals in the story. At this point she is very pleased with herself. The teacher forcibly assists her in taking off her coat. She enters the washroom and, in an aggressive manner, shoves the others away from the washbowl. Refuses to let a little girl share the bowl with her until the teacher makes her do it. Dries her hands and throws towel into the basket, angrily. Runs into the dining room and looks around sullenly. Picks out the most comfortable chair, sits down, and proceeds to make faces at the boy next to her. Eats crackers and orange juice. Demands another cracker. Teacher, talking to another girl, tells her that she has sand in her hair. Claire hits the teacher and in a loud voice exclaims, "I have too, I have too!" She gets up quickly, noticing that the children have gone into the other room. Rushes to the rocking chair. She rocks contentedly and, when no one pays any attention to her, goes to another chair. Teacher tells everyone that it is time to rest.

11:20 A.M. She gets her rug and jumps around while trying to decide where to put it. Finally decides on a spot next to a quiet little boy. Manages to hit him, while putting the rug down. She decides that she will lie on part of the boy's rug. She imitates the teacher, who is requesting the children to be quiet. Pesters the little boy again.

11:25 A.M. Begins to quiet down, but soon starts to imitate the voices of the other children. Takes off her shoes and socks. Sits quietly, playing with her toes. Grows bored and plays with near-by blocks. Teacher gives her a red ball so she won't bang the blocks around. She puts it in her mouth. Will not remove it when teacher says it is dirty. Plays with her foot again.

Claire is happy only when she is the center of attention. Her expression is one either of great self-contentment or of sulkiness. She seems to be inquisitive about objects and people. She is quite satisfied with herself, and very aggressive and impetuous in her actions. After talking with her parents, the observer learned that all her actions at home were tightly reined. It can be presumed that all her pent-up energy and desires for recognition are expressed at the nursery school.

The above records show two different types of children and their problems of social adjustment. Both of these children have been using "fantasy" play in the endeavor to get along with the other children in their own way. It is when these "fantasies" overlap that group activity begins. When children get to know each other and build up a "common history," then the mutual adoption of fantasies occurs. They gain experience in doing things together and discover the sensation of mutual support, both in imaginative play and in real achievement. It is when misfits occur in this environment that the child is stirred to a realization of the reality of other people as persons. In the beginning the child assumes that others will play their assigned roles in his play; but when this assumption is proved false the child learns to try different measures to gain recognition and self-esteem.

CONSISTENCY AND TYPES

In regard to the mental development of the preschool child, it is of chief importance to study whether children of this age already show individual characteristics of expression, and if so, whether they are conscious of such characteristics. Individual characteristics of a child appear in certain preferred forms of action, of reaction, and of expression by means of language, drawings, etc.

Let us first consider children's drawings. There are three main factors which may influence a child's graphic expression. The first is that the child with a pencil in his hand draws lines, forms, and even representations of objects and figures just as they come into his mind. This means, without considering the degree of graphic development, that the resulting picture is completely determined either by chance or by transient impulses and moods. A second possibility is that the child has learned how to draw certain forms and figures and that he copies or imitates such learned or trained patterns. A third possibility is that, without deciding whether the picture is determined by transient moods or by learned patterns, the child always expresses his individual style, similarly as an artist does, whatever object he is drawing.

The general opinion of child psychologists has been that the preschool child's drawing is determined either by chance or by imitation, and not by the child's personality. Since the development of ego-consciousness occurs at a later age, they believe—confounding ego-consciousness with personality—that the personality of the child acquires an individual pattern after his preschool years. If, however, we compare nursery children's drawings of the same object, for instance, the drawing of a man, we readily observe that each child shows definite characteristics. Asking a child to repeat the same drawing at different times, and shuffling such repeated drawings by different children, a neutral observer may be asked to match the drawings done by the same child. We performed this experiment, using three drawings made by the same child at different times and shuffling these with the drawings of two other children, so that the observer had to match out of nine drawings. The matchings were successful from 80 to 100 per cent.

In order to judge the individual style of a child's drawings we have to know some average characteristics of drawings made by children at a certain age. Some exploratory studies were made at a Bard College summer camp. Points of investigation were: to study the average drawing in terms of (*a*) size, (*b*) elaboration, (*c*) concreteness or abstractness. For a fuller understanding of characteristics of expression in the preschool child, corresponding observations were made with four groups of different ages. Ten children were observed in each group.

Size was studied in drawings of a man. The degree of elaboration as well as of concreteness was studied by presenting a child with fragmentary forms, such as a half circle, half a triangle, a wavy line, a horizontal line, and a vertical line. The child was asked to make something out of this form. The responses were classified into categories of continuation of the given pattern and of change of the given pattern by additions, and, furthermore, into a prevalence of realistic and of imaginative patterns. We give the results in the following table.

Prevalence of Patterns in Percentages

Ages	Large size	Continuation of given pattern	Change of given pattern	Realistic pattern	Imaginative pattern
5	80	10	90	50	50
6-10	70	20	80	80	20
11-13	30	30	70	40	60
14-16	30	60	40	90	10

From this exploratory study we see that the preschool children (5 years of age) preferred large sizes, that they changed a given pattern rather than continued it. The older the children were, the more they preferred small figures and the more they followed the given pattern. According to our theory, the reaction of preschool children is related not only to their lack of proper control of movement but also to their drive toward expansion and domination, symbolized by an expansion of figures as well as by an attempt to change given conditions, while in older children the growing self-control and inhibition of expressing their wishes freely goes hand in hand with a tendency toward reduction and submission. There were as many realistic as imaginative patterns in the preschool group,

Fig. 5

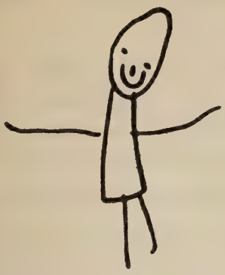


Fig. 6

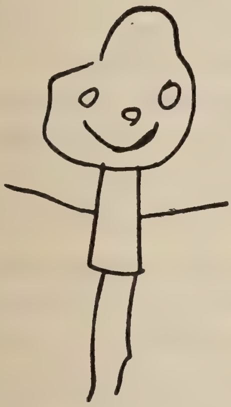


Fig. 7

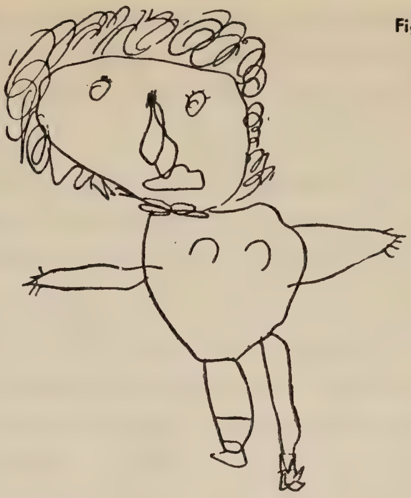


Fig. 8

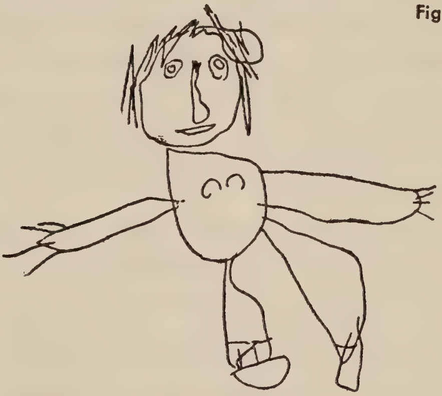


Fig. 10

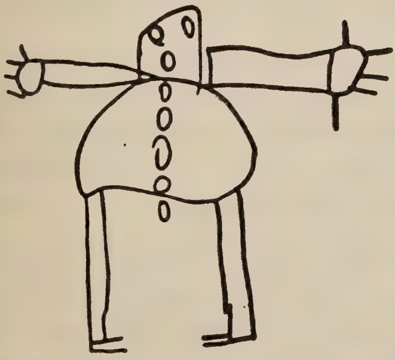
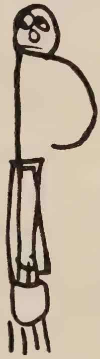


Fig. 9



Figs. 5-10. The Style of Expression of Three Children

while the older children, except the group from 11 to 13, showed an emphasis on realistic patterns. Besides these general trends there were many individual variations.

The different drawings of a man by various children show the individuality of children in the different ways they represent the same idea. We distinguished the expression of feeling, realism, will power, imagination, security, and insecurity as leading features in the conception of a "man." Many other classifications can be made within these groups. Some children emphasize movement, some a resting position; some children emphasize the whole, omitting parts; some draw "what they see," some what they imperfectly remember; some what they wish, some what they fear; and for some children drawings are abstract symbols.

All these different kinds of expression, and many more which may have escaped our attention or were not represented in the drawings mentioned, appear in combinations with each other, thus furnishing numberless combinations of numberless personalities.

One child, a 5-year-old girl, when drawing a man, always gives him a smile (Figs. 5, 6) and the expressive features of the whole figure are well balanced. Dominating are the expressions of rhythm and of happiness. We may consider these drawings as examples of a *feeling type*.

Another child, a girl aged 5, when asked to draw a man (Figs. 7, 8) answers: "I can't make a man but I can make a little girl." She draws a girl with broad forms; the different parts of the body have no proportion to one another, and we note an absence of any rhythm. She draws four and six fingers, but emphasizes many details, such as eyelids, eyelashes, breasts, feet. The child seems to be conscious of the differences of sex; dominating is the knowledge of details of the body, and we might consider these drawings as expressions of a *realistic type*.

The third child, a 5-year-old boy, emphasizes in his drawings of a man (Figs. 9, 10) vertical and horizontal lines which are made with pressure. There is an absence of curves, of swing and rhythm; the position of arms, number of fingers on one hand, and position of feet are wrong in terms of realism. The child explains: "A sideways man, no good because he has no arms," and then he makes a man emphasizing the arms. This is a very active child who cannot have arms enough for all that he plans to do. Dominating is the determination of strokes and the pressure exercised, which seem to be characteristic for the expression of will power; thus we consider these drawings as characteristic of a *will type*.

What we may call the *imaginative type* appears in drawings where the figures are patterned in a highly original way which shows neither an imitation of reality nor a lack of understanding of reality, but indicates that the child purposely uses certain forms to express certain ideas.

Is a child conscious of his individual characteristics of expression? To study this problem we asked twenty preschool children to draw a man, and about three weeks later we showed them, individually, the drawings of a man made by three children. One of these drawings was their own, the other two those of two other children of the same age and sex. The experimenter asked which of the drawings the child liked best. On this occasion the child either said spontaneously, "I made this one," pointing to his own drawing; or, if he did not react in that way, the child was asked whether he knew the person who drew the picture. The general result was that in a majority of cases (80 per cent) children recognized their own drawings. This indicates that, although the drawings of a man by different children may look very similar to an adult, the child usually recognizes his own characteristics, his own style.

When each child was asked which of the three drawings he liked best, his own drawing was the most liked in 60 per cent of the cases, the most disliked in 30 per cent of the cases, and it was in the middle in 10 per cent of the cases. The preference was motivated by the fact that the child knew the significance of features in his own drawing, but not always the significance of features in the pictures of the other children. This became clear in showing to the child his drawing of his family* as well as the family drawings of two other children. The child's interpretation of each figure in his pictured family composition was recorded, and when we now asked for the significance of each figure, we usually obtained the same response which the child had given three weeks earlier. This indicates that the associations connected with the different features of the figures, although sometimes hardly recognizable to the adult observer, were well established in the child's mind; his drawing was already individualized.

IDENTIFICATION AND EMPATHY

If a child projects his associations upon graphic forms he transfers his imagination to graphic movements. Now, is a child able to do the opposite, that is, transfer graphic expression to associations? Such a process is called empathy, which means, literally, feeling into.

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* Procedure described on p. 134

Empathy would appear in a high degree if the child were able to substitute one form of expression for another one, since he would have to feel completely into the first form of expression in order to find an adequate substitute.

We performed the following experiment. We played recorded music for fifteen preschool children in single sessions and asked each child to draw how the music sounded. For our experiment we used three records:

(1) a march, (2) a waltz, and (3) a cowboy song.

Each child was given the following instructions: "Let's do a funny game. You will hear music, and you make a drawing of how the music sounds." Five children refused to do this. Ten children, however, made their drawings, and when questioned afterwards by the experimenter, they gave their explanations of their drawings. We give some examples:

LILIAN

(1) When hearing the march she starts to draw a large circle with a smaller circle inside (Fig. 11).

EXPERIMENTER: "What is this?"
LILIAN: "It is a ball with a tiny ball in it. [She now draws a human figure, saying:] This is my mommy singing."

(2) When hearing the waltz the child draws a house with four windows (Fig. 12).

EXPERIMENTER (pointing to the windows): "What is this?"
LILIAN: "They are singing inside the house. [Pointing to the circles:] These are the singing mouths."

(3) When hearing the cowboy song the child draws letters with small circles and a zigzag line covering them (Fig. 13).

EXPERIMENTER: "What does this mean?"
LILIAN: "The letters are singing. [Pointing to the circles:] These are their mouths. [And pointing to the zigzag line:] This is the sky."

(1) The first form the child draws seems to be a reproduction of the disk with its hole in the middle. She then transforms this shape to a human face in which the mouth takes the place of the former hole of the disk, thus expressing that the disk is singing, and, as she says, it is singing with the voice of her mother.

(2) Here the child transfers the concept of singing, expressed

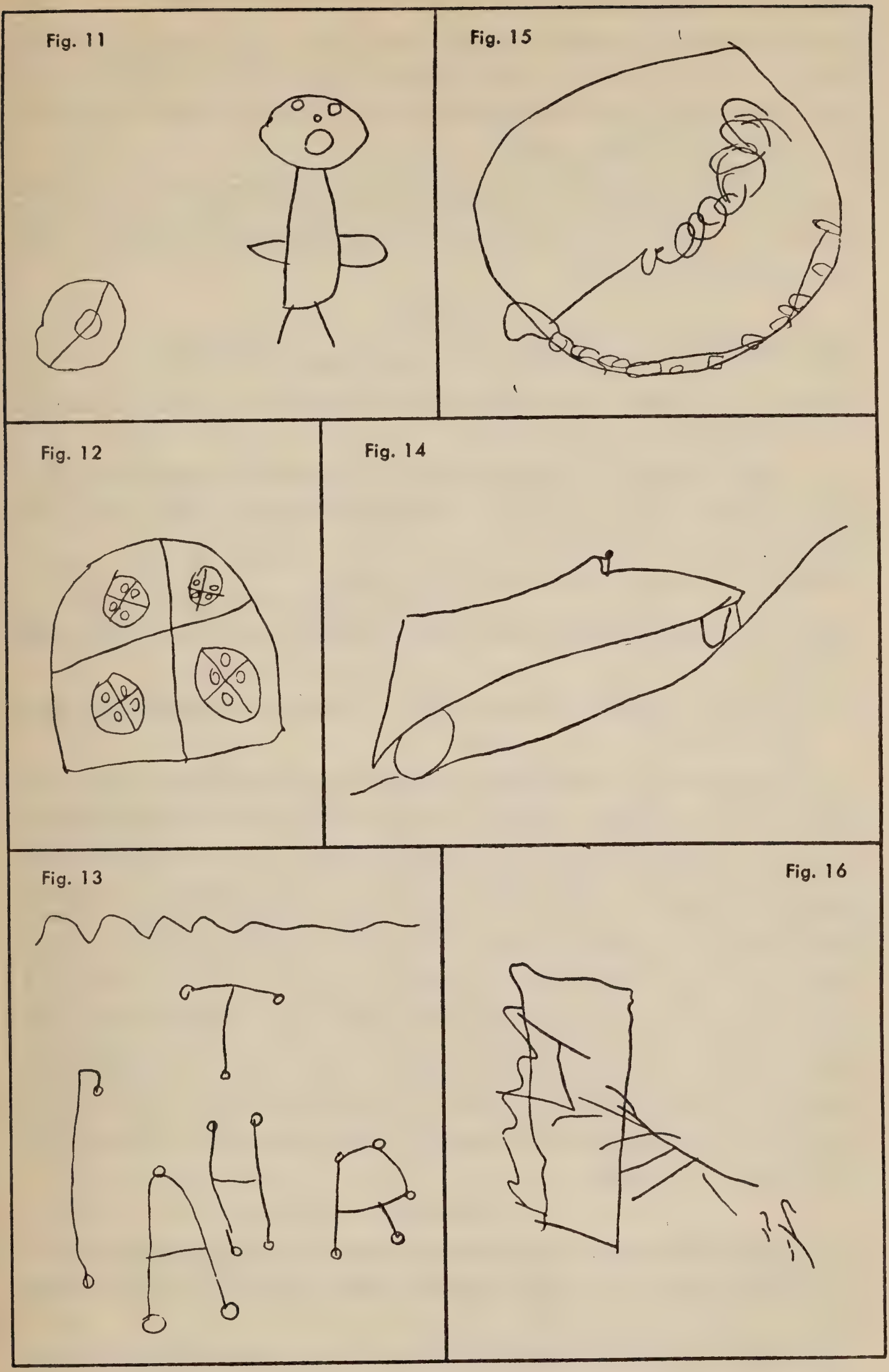

Fig. 11

Fig. 15

Fig. 12

Fig. 14

Fig. 13

Fig. 16

Figs. 11-16. Drawings to Music by Two Children by a circle, to the windows out of which the sound is coming. The choice of a house for the waltz, with the comment, "They are singing inside the house," may be explained by the softer sound of the waltz as compared with the march.

(3) The only disk which has words is characterized by letters, and the theme of singing again is represented by the hieroglyphic of the circle. But it seems that the idea of the singing cowboy is expressed by the skyline.

PETER

(1) When hearing the march he draws a car (Fig. 14).

PETER: "It sounds like a racer. It runs so fast, it comes down the hill."

(2) When hearing the waltz he makes a circle and draws a train at the circumference of the circle. Smoke comes out of the locomotive (Fig. 15).

PETER: "It sounds like a train and smoke."

(3) When hearing the cowboy song the child explains his drawing (Fig. 16):

PETER: "It sounds like a boat. I make the guns. I'm afraid of guns and snakes."

If we were to characterize the three musical pieces we reproduced for the children, we might say that the main characteristic of the march is its fast movement and its sharp and forceful rhythm. The characteristic of the waltz is its slow and soft movement and its swinging rhythm. The cowboy song is dramatic, and for the children it is related to exciting cowboy stories. Comparing the three drawings by Peter, the accentuated and forceful rhythm in the strokes standing for the outline of the racer as well as the association of the fast running racer expresses the march, while the soft movements of the circle, the running around of the train and its spiral-formed smoke stand for the waltz. The dramatic elements of the cowboy song are expressed by a drawing of a dramatic scene without emphasizing the rhythm.

BRITTA*

(1) When listening to the march she draws "a man playing ball."

(2) When listening to the waltz she draws "a darling in a rocking bed."

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* Limitation of space has obliged us to omit a reproduction of this child's drawings.

(3) And when listening to the cowboy song she draws "a sun, a little girl, a horse, a pail and grass."

Again there seems to be a relationship between the music and the drawn associations. The quick rhythm of ball-player, standing for the march, is contrasted with the soft lullaby represented by the rocking bed which is associated with the waltz; and the cowboy song gets a cowboy landscape.

BETTY *

(1) Betty begins her drawing of the march with sharp angular lines and explains the whole drawing as "a dress."
(2) The waltz is interpreted by starting with curves, the first part being explained as "a valentine" and the second part as "a map."
(3) For the cowboy song she draws a man who is singing.

Regarding the graphic-musical relationship, the march has the most accentuated pointed lines; the swinging curves of the waltz are graphically represented by emphasizing curves; the cowboy song is represented by a singing cowboy.

After the drawing the children were asked to state their preference. The average scale was:

Most preferred:	*Next liked:*	*Least liked:*
Cowboy song	March	Waltz

Each child reacted to the musical stimuli in an individual way. Although all of them were able to transpose an acoustic impression into a graphic expression, the kind of transposition depended on individual associations. Comparing these associations with the behavior observation of the children, a unity of pattern frequently could be recognized. Lilian, who had the association of singing with the three musical pieces, is a happy and musical child. Peter, who had the associations of a car, a locomotive, and a gunboat, is technical-minded and realistic. Britta, imagining a "darling in a rocking bed" and a landscape, is a motherly and nature-loving child. Betty, interpreting the music by a dress, a valentine, a map, and a singing man, likes to display adult attitudes. Thus, the preschool child's perception of the world and his attitude toward the world are already patterned in an individual way.

Our examples suggest that children in their graphic expression are capable of an empathy in two directions: in expressing the form and in expressing the content. The rhythm, the accentuation, and the degree of pressure in strokes seem to correspond to the rhythm, to the accentuation, and to the loudness of sound. Moreover, the general "feeling tone" of forms is related to content associations which correspond to them. The choice of a certain content seems not to be accidental but actually related to acoustic associations evoked in the child. We have therefore an indication that a child expressing himself graphically does so under the influence of directing associations, and that these associations determine the forms, their position, and the content they stand for. These processes, however, have nothing to do with the intelligence of the child. Children's drawings are mainly determined by associations and emotions, a finding which suggests the necessity of being very careful in evaluating intelligence from children's drawings (see p. 167).

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* Reproduction of drawings is omitted.

NEUROSIS IN CHILD AND ADULT

Psychoanalytic observations indicate that the neurosis of an adult has its origin in childhood experiences and childhood problems which he was not able to solve. The main characteristic of these early experiences is frustration of the child's wishes. Freud (202-204) (cf. 196-199, 335) puts emphasis on wishes in the sexual sphere, Adler(6-9) on wishes in the sphere of accomplishments (superiority—inferiority) and in the sphere of social relationships. According to psychoanalysis, the memory of early experiences is suppressed because of its disturbing unpleasantness; the energy necessary for this continuous suppression is drawn from the individual's total energy reservoir, so that he cannot use this energy for valuable purposes. In short, the neurotic individual does not integrate his childhood personality into his maturation but eliminates it by suppression. The structure of a neurosis in an adult is therefore different from a neurosis in early childhood, because the adult splits the continuity of his personality by eliminating an earlier developmental stage of his personality, while the young child, not eliminating an earlier stage, preserves the unity of his personality. A suppression of association takes place only if a frame of reference is established with which certain associations are incompatible. Only when the child has developed moral standards, when he has differentiated his self from his environment, can associations be withdrawn from his consciousness. Suppression is characteristic of the neurosis of an adult, but not of the young child. This structural difference between child and adult has deep implications for explaining psychic disturbances or so-called neurotic attitudes in both child and adult.

The supposed mechanism of suppression implies that the adult develops a dual personality. There are the contents of his conscious and, parallel, the suppressed contents which are only withdrawn from consciousness but are present in the unconscious. Here in the unconscious the associations, charged with emotions, have an energetic influence upon the associations in the conscious; they act to stimulate or to inhibit. The individual, not aware of these dynamics, does not know consciously the deeper roots of his motivations. Hence, each activity gets two dimensions: its manifest meaning in the scheme of consciousness and its latent meaning in the scheme of unconsciousness. Since the unconscious motivations underlie the conscious ones, the neurotic activities and ideas of the adult have a latent significance which is different from the manifest one.

These two dimensions seem not to exist in the young child. Manifest and latent meaning are not yet separated, his conscious associations are rarely substitutes or modifications of unconscious images. Can we then speak of a neurosis in a young child? What is called a neurosis in a young child should better be called a behavior disorder, or an emotional disturbance, or lack of adjustment, since those characteristics which make up a neurosis in the adult are usually not present in the young child (exceptions are cases of a precocious development). The interpreter of a child's behavior can therefore not work with the same processes of symbolization as they appear with the adult.

EXPRESSION ANALYSIS

What the child expresses is real expression and not a hidden, symbolic one; or, we might say, what the child expresses is a realistic-symbolical expression. The symbols are a full part of the child's reality, and the whole dictionary of symbols, derived from the adult's experience, cannot play a role in the child's structure if we exclude a supposition of innate symbols. We should like to illustrate this viewpoint by reporting a discussion which the present author had with a psychoanalyst about two dreams of a 5-year-old girl.

FIRST DREAM

The child dreamed about a fish up in the air, next to a tree. Her mother was trying to get it down with a stick when it opened its mouth.

Interpretation of the psychoanalyst: "We can see here the whole conflict. The fish is a phallic symbol; each phallic symbol is a symbol of power, mental or physical. The fish is high in the air, is unattainable for her."

Objection by the present author: The interpreter presupposes either that the little girl is conscious of the sexual difference between boys and girls, or that the symbol is innate. If we think, however, in terms of the child, the elements of the dream may be a realistic-symbolical expression. The child may have been told that babies are brought by the stork who fishes them out of the water. The child may have heard that birds lay their eggs in nests hanging in trees. The condensation of fish and bird may be expressed as: fish in the tree. The child may fear that the mother is trying to get another baby, namely, the fish down from the tree.

SECOND DREAM

"Last night a doggie came and ate me up."

Interpretation of the psychoanalyst: "Here she is the dog who wants to eat other people and bite. Also here is a castration fear."

Objection by the present author: The transformation of the dream expression into its opposite sense is completely unjustified; in such a way we can transform any material from black to white and white to black. If the child dreams of being eaten by a dog she is not the dog but has a fear of the dog. In the world of the child the dog frequently is a symbol of fear. To be eaten up means to disappear. Now we ask: Why does she fear that she may disappear? The preceding dream may give the answer. The possible arrival of a new baby makes the child fear that she will lose her role, that she will disappear from the interest of her parents.

This example indicates the first difference between psychoanalysis and what we call "expression analysis." Expression analysis is a direct interpretation of the expression, within the limits of the child's orbit of experiences. We renounce the consideration of the presence of innate symbols (even if they should exist), or the complicated mechanism of substitutions and repressions.

The second difference between expression analysis and psychoanalysis is that the expressive value should be studied by different media. It is desirable to interpret not only the dreams, but also the behavior and the graphic movements of the same child. Graphic movements are an especially favorable object of investigation, as here the same expression is determined by several coordinates: the form which can be measured, the expression to which an approach can be made by projective techniques, and the content which appears through the child's explanations and associations.

THE CHILD'S INDIVIDUAL HIEROGLYPHICS

Scribblings by children and scribblings by adults—their so-called doodlings—may have a very similar appearance; however, structurally they must be very different. Since, according to our investigations, all outer movements are reflections of conscious or unconscious associations, the graphic movements of young children and of adults are expected to have a different significance because the associations of child and of adult are of different kinds. And, comparing the manifestly similar scribblings by various young children of the same age, their significance is expected to be different if each scribbling is a hieroglyphic for associations.

If we ask a young child for the meaning of his scribbling we might in some cases get no explanation because the lines reflect only a movement, the meaning of which cannot be explained by the child himself. In other cases the child may try to project images upon the movement pattern, like an interpretation of an ink-blot, thus giving a rationalization. Such an answer can easily be distinguished by the vagueness of response from those answers which give an immediate and direct explanation. A repetition of the scribbling with the same explanation would give us evidence that the scribbling was an intentional representation of images and associations.

Usually the graphic movement of the child is more like a picture-writing about objects than a graphic representation of these objects. We give an example: A child draws some unorganized lines and scatters dots between the lines (Fig. 17). The apparent graphic pattern does not suggest any meaning to the observer. The child, a 5-year-old boy, when asked for the significance of the lines, answers, "A steam shovel—not moving—and ants getting bigger and bigger." These associations are as incoherent and incomprehensible as are some dream pictures. What have ants to do with a steam shovel, why are the ants getting bigger? The child, when asked to explain his picture, gave the following associations:

> First make a big steam shovel—and write this:
> The steam shovel's picking up the dirt
> And throwing it down into the truck.
> The steam shovel's crawling along
> To get some dirt.

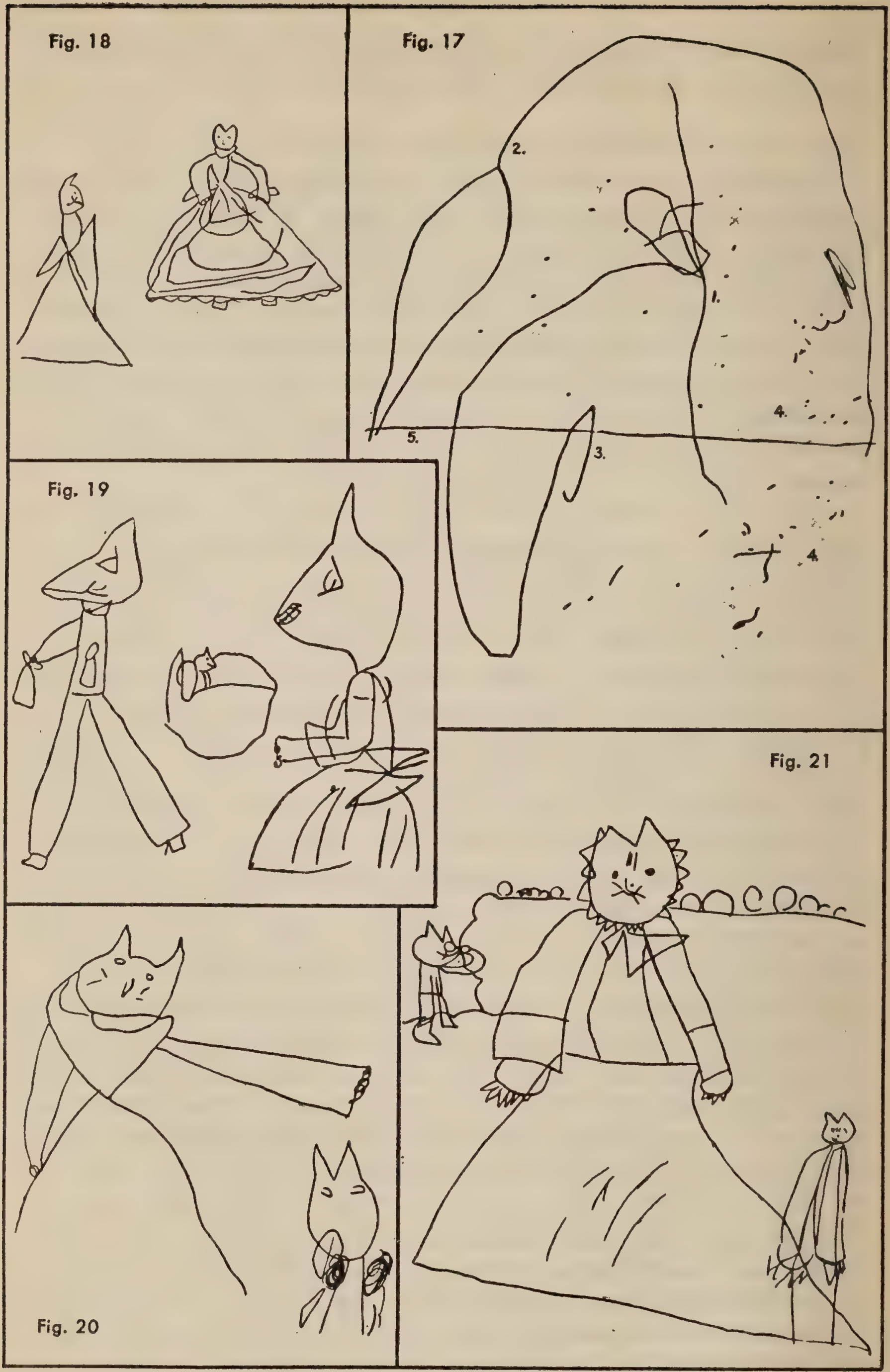

Fig. 18

Fig. 17

Fig. 19

Fig. 21

Fig. 20

Figs. 17-21. Cat Complex of a Girl

And letting it down into the gravel bank.
And when the pile gets big—
Then it picks it up
And puts it right down into the train.
It comes along,
Picks a big load of dirt up
And puts it down too,
And then it rests.
Then it gets up—and stretches himself—
Then knocks all around,
Goes back down to the gravel bank
And throws it right down into the truck.
Goes over and goes over—
Comes along and comes along.
It throws it down into the truck again,
Comes along, comes along, comes along,
Gets some dirt and throws it over,
And gets some dirt and throws it over,
And gets some dirt and throws it over.
Then he lies down and rests again,
Gets some more and throws it over.

The child explains the pattern in his drawing as follows:*

1. The steam shovel stretches itself;
2. it picks up dirt;
3. it lies down and rests;
4. ants;
5. truck.

The child explains the function of the steam shovel as picking up dirt, "when the pile gets big—then it picks up." The first association, "ants getting bigger and bigger," now appears as a symbolization for the image of growing dirt. The child seems to equalize dirt and sand, piled up by the steam shovel, and has the association of ants coming out of the sand.

We now tried to reconstruct the motivation for the child's associations. Inquiring into the child's recent experiences, we heard that during rest hour he took two picture puzzles and enjoyed putting them together. The first picture puzzle represented a "steam shovel," the second a "fire engine." When the child asked the significance of both objects, he was told that the shovel is used for coal, sand, or dirt and that the fire engine throws jets of water to extinguish fire and save buildings. The fire engine seems to symbolize danger, an association which apparently underlies the concept of growing ants. If the shovel did not move, the dangerous dirt or sand would become bigger and bigger. The drawing therefore seems to express the child's fear: if the steam shovel is not moving, danger is growing. The child's poem seems to be an attempt to overcome his fear by explaining why the steam shovel is not moving. The steam shovel is only resting, "then it gets up—and stretches himself—then knocks all around."

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* We have numbered the respective patterns in the reproduction of the drawing.

Our example indicates that an apparently meaningless scribbling may stand for an elaborate context. The scribbling appears to be the "writing" of the young child, and we have to find the key for deciphering his individual hieroglyphics.

THE GRAPHIC DREAM. ANALYSIS OF INDIVIDUAL PROBLEMS

A main difference between the thinking of preschool children and adults is, as we have already discussed (p. 24), the apparent incoherence of children's associations, which is due to the fact that children omit connecting links. The interpreter of children's associations or imaginings should therefore attempt to reconstruct the missing links. Such a reconstruction, however, is frequently very difficult since a child cannot be questioned like an adult, his attention being fluctuating; if the examiner tries to analyze one image, the child may already be occupied by new images. It is very helpful, in reconstructing links in associations, to have not only a child's verbal report but at the same time a pictorial report. We can often get, from the child's pictorial representation, the links which are missing in verbal representations.

Examining a child's drawings and associations, we must first study their emotional degree. We distinguish whether pictures and associations follow slowly, without an inner urge, or whether the child is overflowing with pictures and associations, indicating an inner need for these projections. In the latter case the child is worried about certain problems which stimulate him to think them over and to express them in pictures. If we get a sequence of different associations and of different pictures we may separate such sequences into those taken from daily life and those taken from imaginings. The first group, daily-life associations, might be divided into those which are a mere reproduction of recent experiences (representations of landscapes, toys, etc.) and those which represent stable parts of the child's world (figures of father, mother, sibling, animal, etc.). The second group, referring to the child's imaginings, may be separated into those which represent identifications with fairy tales and those which represent the child's own imaginings. Children are not able to perceive anything without relating it to their personality. When they hear a fairy tale, they integrate the details of the story into their own experience. The story "Peter Rabbit" made a highly emotional impression upon one child. Her pictures are related to this story as a representation of her own problems. Describing the pictures, the child mixed up the heroes of that story, Mr. McGregor, Mrs. McGregor, and a bunny, with her own family situation, substituting her father for Mr. M., her mother for Mrs. M., and the baby for the bunny.

In any case, if we have a sequence of drawings and a sequence of associations, our analysis starts in searching for a common denominator to which each element can be related; then, by combining and interrelating all elements with each other, we may reconstruct the sentence which was spoken by the child's inner personality in the language of pictured associations.

A LITTLE GIRL'S HATE AGAINST THE NEWBORN BABY, REALIZED IN AGGRESSION (V.C.)

Ellen is a 4-year-old girl. We have already pointed out that a child's art is always a reproduction, verbally as well as pictorially, of his own emotional situation.

The first series of pictures which the child made invariably were pictures of a cat. She drew a cat dancing, working, in bed, as a bride, etc. The following record is an example of her fantasies accompanying the drawing of a cat (Fig. 18):

> I can't draw people so well. I can draw animals better. This is a kitty.
>
> This is her little shoe—all shiny and new. These are the laces. It fits right on her foot.
>
> This is the top of her panties, and part of her other leg.
>
> This is her puffed sleeve. It has lace on it. Isn't it beautiful?
>
> And her thin wrist and *sharp claws.*
>
> Her beautiful hat and her veil—she's old enough to have a veil. It's all silky. And her long, long train.
>
> This is her shoe. It isn't new, she's had it several days. It's light black. Isn't it nice? And her foot fits right in it.
>
> This is her apron—bow of her apron strings.
>
> This is her dressing table. This is the drawer. She keeps all her dresses and her long, long train, all folded up. Pretty silk dresses.

> This is her long long bed, it's even bigger than this. She isn't a little girl. She's grown up. She's 16. But she's not a mommy yet. She's just getting married.
>
> This is the cushion. Isn't it soft?

All that the child wants to be in the future is projected upon the cat, which for the child is the symbol of beauty. The child, furthermore, emphasized the words "sharp claws" and an emotional expression came into her face. Ellen, as we shall discuss in the following, identified herself with a cat, and one reason for this identification was that the cat has sharp claws and is therefore aggressive. The child projects upon the cat associations with fairy tales, such as images from the story of Cinderella. The cat is an enchanted princess, and the child, identifying herself with the cat, is an enchanted princess herself. In her drawing she pictures the cat family, the mother sitting before the cradle, the father busily going away (Fig. 19). In other pictures the child represents the mother cat in a domineering attitude (Fig. 20); the child kitten stands isolated while the baby kitten plays near the mother (Fig. 21).

In her first series of drawings the child emphasizes the eyes of the cat (Fig. 22,1). This does not seem extraordinary, since for the child the eye is the most interesting organ, the key to the world. But Ellen, emphasizing the cat's eyes in a drawing, makes a smaller and a larger vertical stroke on the side, calling the smaller stroke "Baby-I" (the ego) (Fig. 22,2) and the bigger stroke "Mommy-I" (Fig. 22,3). The child combines here two elements, the stroke "I," standing for the expression of the first person, and the word "eye." The eye therefore becomes a symbol for the child's ego. Since the eyes are a predominating feature in the cat, we find another reason why our child selects the cat for her animal identification. In a picture which she titles "A Clown, Eyes, and the Baby" (Fig. 23) the child draws a human figure before a cradle, and eyes detached from any figure. The eyes are a symbol of observation, directed, as we shall discuss later, against the parents and their affection for the new baby—an affection which the child ridicules as clownish.

But the child's drawings tell us of a fourth motif for her cat identification. In a later series of drawings the emphasis on the eye is substituted by emphasis on the ear. With her high degree of observation, Ellen noted that in a side view only one ear of the cat is visible (Fig. 24). She enlarged this ear more and more until it had the appearance of a gigantic horn (Fig. 25). When the series of

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* Cf. a child's confusion of "glee" and "glue"; see p. 24.

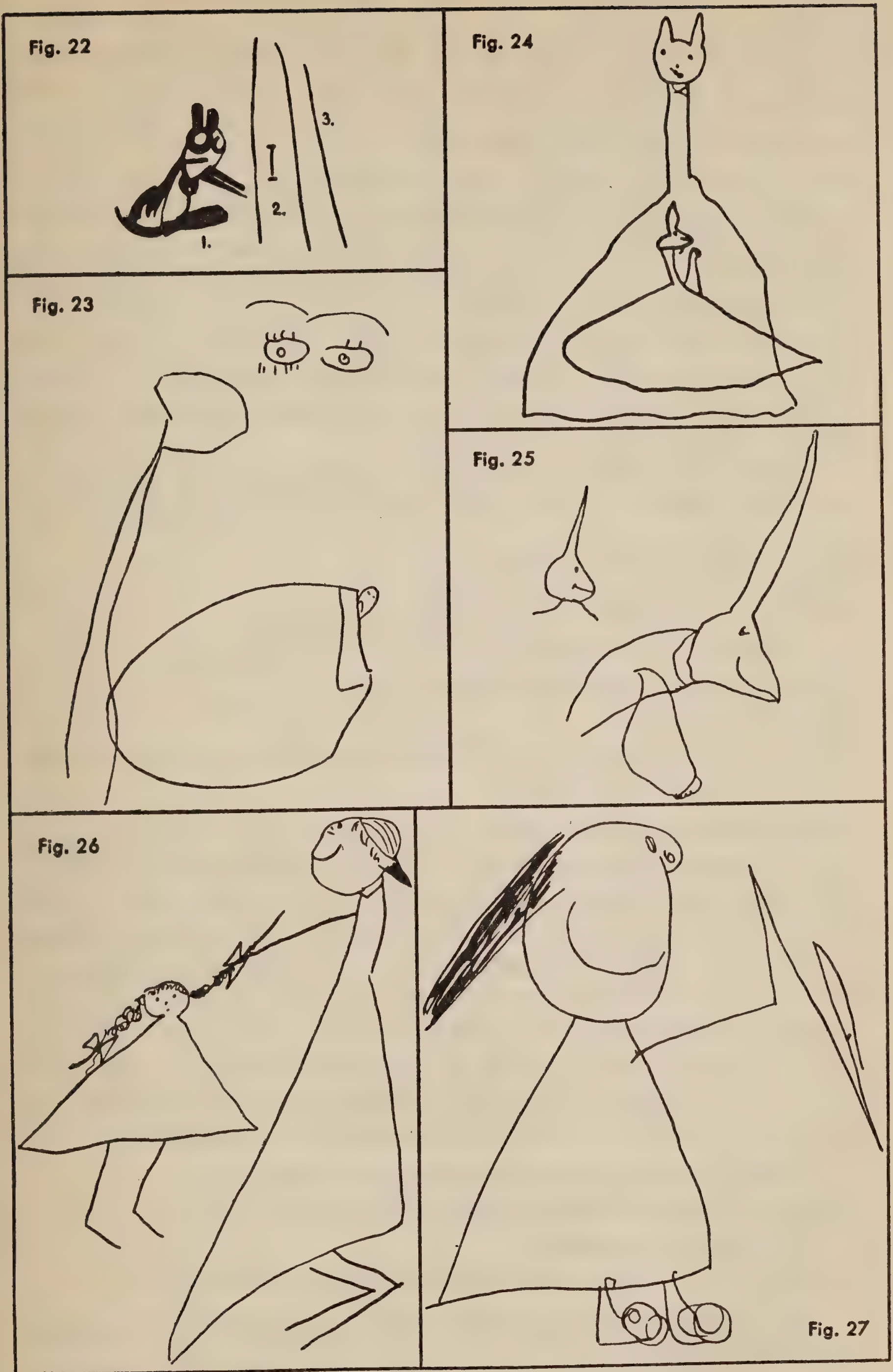
Fig. 22
1.
2.
3.
Fig. 23
Fig. 24
Fig. 25
Fig. 26
Fig. 27

Figs. 22-27. The Symbol of Eyes and Ears in the Cat Complex cat drawings was terminated and the child started to draw human beings, one of her first drawings was titled "Mommy and I." Here the child in her drawing of her mother gives her such a horn, representing her braid or hair knot (Figs. 26, 27). With this association the cat becomes a symbol of the child's mother, or, better said, of motherhood. Actually, Ellen always called the cat "mother kitten." She had a cat at home who had young kittens. The cat is therefore a symbol uniting at least three chains of associations: that of danger and aggressiveness (sharp claws), that of ego representation (I—eye), and that of motherhood (ear—horn—coiffure—mother). We shall discuss in the following how these associations are interrelated; but first we shall report the child's behavior problems related to her animal identification.

The child played continuously at being "mother kitten." If somebody called her by her real name she fell into tantrums:

ELLEN: "I'm mother kitten."
OBSERVER: "Hello, mother kitten."
ELLEN: "I am mother kitten today, I really am."
(Another observer calls her "Ellen." Burst of tears.)
ELLEN: "But I want to be mother kitten."
OBSERVER: "Why?"
ELLEN: "Because she plays with her little kittens and Ellen doesn't have any little kittens."

Here the child gives one reason for her animal identification, namely, that of being an animal mother who plays with her little children. She apparently identifies herself as an animal mother with her real mother and the new baby. Her identification leads to great troubles, as the adults forget her identification and call her by her real name. But just this trouble seems to be an aim of her behavior, because it enables her to react to the mistakes of the adults with tantrums. With these tantrums the child accomplishes two tasks at the same time: to demonstrate that she is misunderstood by the adults and to attract attention. The following record is illuminating:

(Ellen is crying, no one knows what is the matter.)
ELLEN: "I want the others to ask me what's the matter."
(On another occasion:)
ELLEN: "When you are good nobody pays attention to you."

The feeling of being misunderstood is the basis for a predominating unhappiness:

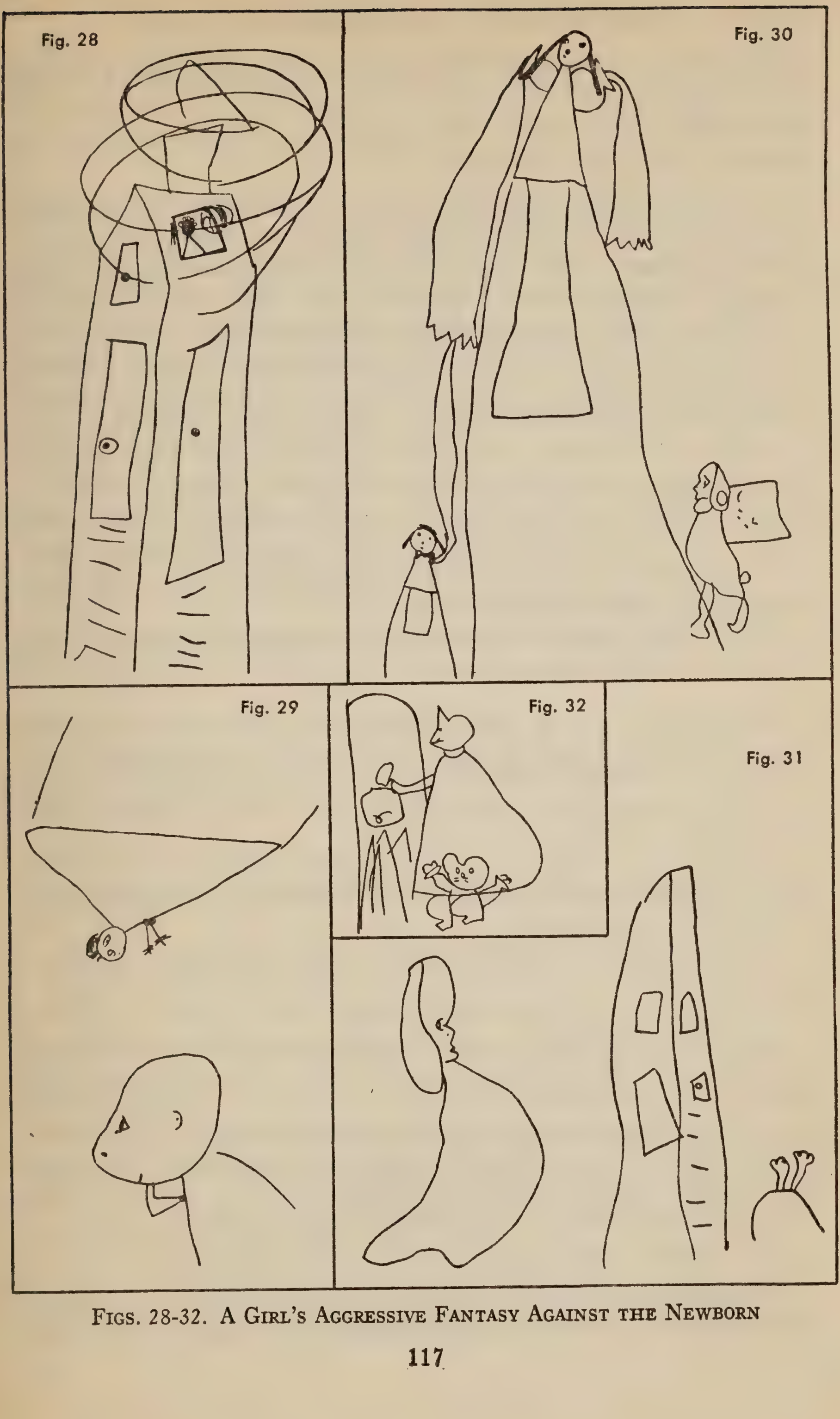
Fig. 28
Fig. 30
Fig. 29
Fig. 32
Fig. 31

Figs. 28-32. A Girl's Aggressive Fantasy Against the Newborn

ELLEN: "I am not happy. I am not happy. Daddy spanks me when I cry."
OBSERVER: "Do you feel better then?"
ELLEN: "No, I don't feel better."

We now get still another indication of the reasons for the child's cat identification: it is the child's feeling of isolation. Such an isolation appears, for instance, when the child draws herself looking out of the top window of a house (Fig. 28). The walls of the house are full of locked doors. Smoke coming out of the chimney surrounds the top of the house and the window from which the child is looking. The chimney, as we shall see later, has a special significance. Because of her feeling of isolation the child likes to get attention by all means. She escapes to the animal world because she observes there what she wants to observe, namely, an animal mother playing equally with all her little children. In the child's interpretation, her own mother now only plays with the new baby and leaves Ellen alone. This experience prevented the child from identifying herself with her mother.

When Ellen draws the baby she accompanies her picture (Fig. 29) with the following comment:

> This is going to be cute. Isn't that a cute baby? Here are her ears. Isn't that a cute little ear? Look at that little baby. Look at her bent legs. [Carefully counts in a whisper as she draws fingers on baby's hands.] Look at her cute little hands, here are the puffed sleeves on her dress. [Erasing her feet:] You can't see her feet 'cause her dress is long.

Ellen's emphasis on the cuteness of the baby is so pronounced that we may doubt its sincerity.

During rest hour the child starts a series of pictured stories.

FIRST STORY

> Now this story—is about a mother and her little girl. This is the stove. Once upon a time there was a mother and two little girls—*no, one girl;* standing right behind the stove. They had bunnies—all kinds a bunnies—pink—did ya ever hear of a pink bunny?—and black—did ya ever hear of black bunnies?—and purple—did ya ever hear of a purple bunny?—and gray—did ya ever hear of a gray bunny?—and they had purplish red—did ya ever hear of that color? It's a very funny color for a bunny, it's almost a skunk. . . .

(Fig. 30) Picture (drawn and explained by the child)

> The mother goes with the two little girls, she was holding one of the girls' hands because she didn't wanna go where she has to go. So she went for a walk

> holding her left hand and presently she heard a big noise—a furnace. They found it was something bigger than you, bigger than a giant, bigger than the stars, bigger than anything. [Pointing to the figure on the right side:] She's going barefooted, you can't see her arms.

If a certain association is accompanied by some kind of emotion we get a strong hint that just this association expresses a tension of personality which might lead us to the central problem of the particular personality. Such an emotion may appear in different forms. Psychoanalysis has revealed the diagnostic value of mistakes in speaking and acting and could show that a mistake appears if two ideas struggle with each other in the individual; one idea becomes eliminated, but the traces of the struggle appear in mutilations and corrections of words.

When in our case the child says, "Once upon a time there was a mother and two little girls—no, one girl," we consider this correction as an indicator of an emotion. The child continues, ". . . she was holding one of the girls' hands." Thus we reconstruct an association of the child: There was a mother with two children, but only one had any significance, so that one can say just as well: There was a mother with one child.

SECOND STORY

The second story, which Ellen also illustrates by a drawing (Fig. 31), tells us:

> She's coming to bake the father bunny—'cause the father bunny wasn't nice to the mother bunny. She's goin' to make him into a birthday pie and then she's goin' to eat him.

A picture (Fig. 31) shows the mother before the house; behind it, the pie. The two paws of the father bunny are sticking out of the pie. In another picture (Fig. 32) the mother, in the form of a cat, is baking the father-pie in an oven. The child kitten sits before the mother.

The idea of the father's transformation into a pie derived from the story of Peter Rabbit. Children's imaginings are seldom a pure play of fantasy; they are mostly projections of their wishes and fears. Therefore, when analyzing fantasies, we are led to the tensions of personality based upon fears, escaping to wishes. Why does our child wish that the mother may bake the father into a birthday pie and eat him, punishing him " 'cause the father bunny wasn't nice to the mother bunny"? What was the father's crime? In the thinking of children as well as of primitive peoples, and even in the adults of our time, the law of retaliation reigns. Retaliation, from the Latin *retalio,* means literally: to return (*re*) like for like (*talis*). One has to pay by an act of the same kind as has been received, to return good for good or evil for evil. But all imagined wishes and fears of the little child have to be taken realistically, since imagination and reality are mingled with each other, forming a homogeneous unity.

When in our case the father is punished by being transformed into a birthday pie, this may be a retaliation because he made a birthday pie—he has given a baby to the mother, as the child may have been told. The idea that children are made like a meal appears frequently in young children. Piaget gives some examples:(465) * (Four years 10 months): "I think it's a meatmaker who makes children." (Five years 7 months): "I know already I should go to a butcher and get lots of meat and shape it." This idea immediately leads to the concept that children originate by the way of eating. Piaget also gives some examples of this kind:† (Seven and one half years): "What do mummies eat to be able to make babies?" (Four years 10 months): "Where is the baby now that a lady is going to have next summer? Has she eaten it?" In our case, the father was eaten in retaliation for his act of forcing the mother to eat an evil thing. Questioning the significance of a "birthday pie" (see Fig. 31), we would define it as a present for the day of birth, related to the act of birth. Reconstructing this element in the chain of associations, we come a great step further in our interpretation because the association "birth" fits exactly into the emotional association with the two little girls, of whom only one was significant and a support for the mother. The birth of the other one could be declared null and void. Thus the birthday pie appears as a retaliation for the pie which the father made into a little baby; now he himself becomes such an evil pie.

Still another picture is commented on by the child (Fig. 33):

> That's mommy. She's in bed. She's just peekin' out of the window. She has very long hair. She's goin' to have braids some time [1]. This is a baby [2]—and this is a baby [3]. This is the cook [5]. She has to cook dinner for the babies. This is the stove [7] and this is the dinner [8].

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* P. 364.
† Ibid.

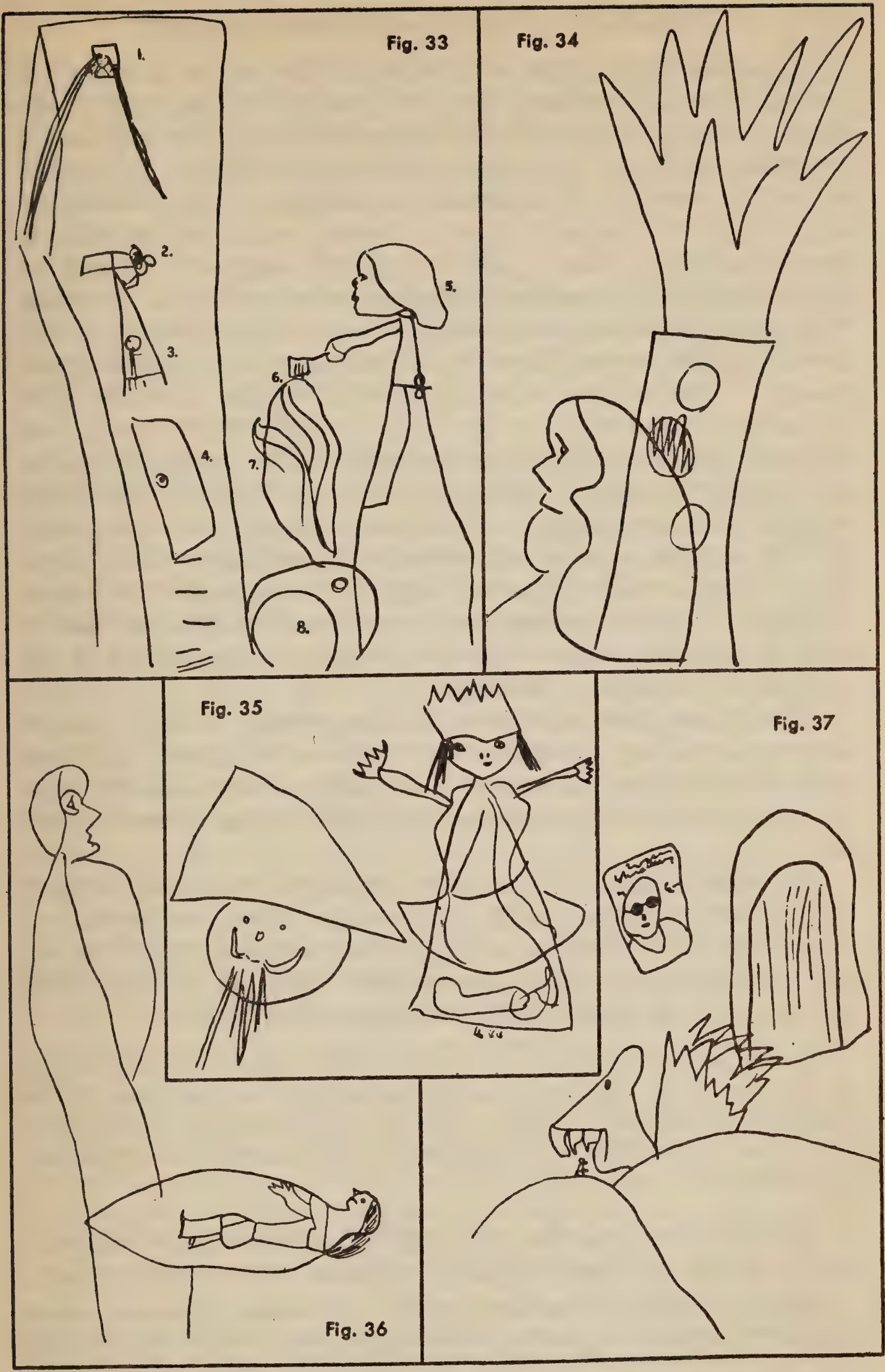
Fig. 33
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3.
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Fig. 34
Fig. 35
Fig. 36
Fig. 37

FIGS. 33-37. BIRTH FANTASY OF A GIRL

The associations might be translated: The mother is in bed because the baby is cooked in her womb, baked in the furnace. But there is one contradiction here that is significant of the thinking of the child, namely: "[The mother] is in bed. She's . . . peekin' out of the window." The thinking of children is a symbolic thinking. The word "symbol," from the Greek *symballein* (literally, to throw together), means: elements thrown together, forming an object, animate or inanimate, standing for or calling up something intellectual. Children's associations are not reproductions of real facts, but different real facts are thrown together to form a certain concept. Whether these different facts fit together in reality is of no concern to the child; we may say the child thinks, speaks, and expresses himself in the form of a rebus.* The contradiction that the mother "is in bed" and at the same time "peekin' out of the window" can be explained in such a way. On the wall of the house with the window out of which the mother is peeking, two little babies are climbing upwards till, as we might easily realize, they will enter through the window and come to the mother. The idea that children come through the window, fall from the sky, or are brought by the stork is very familiar to children.

The picture thus represents the three phases of birth, just as early medieval art shows different phases of a happening in one picture. The three phases are: the baking of the child, the child entering through the window, and the child forcing the mother into bed.

According to children's concepts, babies come not only through the window, but also through the chimney. They are brought as presents by Santa Claus, who comes down the chimney. When the observer asked our child on another day: "Will you draw a picture for me? Of your family?" the child answered (Fig. 35):

> No, I'm gonna draw a picture of someone else, someone you don't know. She will look awful. No, she will look beautiful. But first I'm gonna draw a picture of a Santa Claus. [Does so.] Now I'll draw a picture of a lovely queen. She will look beautiful. First her eyes and her nose, those are her nostrils, and her mouth and her crown.

The child had used the same expression before: "She will look awful, no, she will look beautiful" with reference to her mother.

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* Webster's Encyclopedic Dictionary (Chicago, 1941) explains: A rebus is a set of words written by figures or pictures of objects whose names resemble in sound those words or the syllables of which they are composed; thus "I can see you" might be expressed by figures of an eye, a can, the sea, and a ewe; hence a kind of puzzle made up of such figures or pictures.

The pregnant mother looked "awful"; when the baby was born she looked beautiful again. Santa Claus is directly connected here with the association related to the baby. But the child wishes to throw the babies "down the chimney head first," the way they came to the mother. This is the story told by the child:

> Once upon a time the awkward baby things, little bugs and insects were crawling around on the old dirty floor. . . . The mother was very unhappy, she got so angry she threw out a needle and pricked something and killed them. . . . Then she went out on top of the roof and threw them down the chimney head first. That wasn't very comfortable, was it?

The chimney is now identified with the furnace or with the stove; they are the containers of the fire in which the baby is prepared. Again and again the child's drawings represent the stove, out of which comes the fire, and beside the stove the picture of a woman, of a mother. The child emphasizes the holes in the stove, making small holes, "which become bigger and bigger" (Fig. 34). We may conclude that these holes become bigger and bigger until the baby falls out of them. The analyzed significance of chimney, stove, or furnace now explains the child's first associations: the mother, walking with her children, "heard a big noise—a furnace. They found it was something bigger than you, bigger than a giant, bigger than the stars, bigger than everything." It seems that the mother hears the furnace of birth, which forces a new baby upon her because that furnace is "bigger than you," "bigger than everything."

Now, in another picture (Fig. 36) we see the figure of a woman, and, at right angles to her, going into the body of a woman is a child, encircled by a line which has the shape of an egg. But this picture, demonstrating the problem of birth, associates with it the expression of anxiety, since the mother has a quite unhappy expression.

The anxiety of a child at getting a new sibling is too well known to be discussed here extensively. Every child fears that he may lose his position with the birth of another child. Freud demonstrated from experiences gained through psychoanalysis and from several biographies and recollections of adults that children wish to throw a new baby out of the window through which they believe it has come. Hence we understand children's ideas of retaliation in throwing the baby out of the window through which it came, returning evil for evil.

Actually, the aggression of the child against her own family appears in a drawing (Fig. 37) made some weeks later. She explains, "That's a tiger eating these three: mother, father, and baby." The hate for the newborn baby now reaches its climax. The child does not play being a cat any more but becomes a tiger who eats babies. In her fantasies her mother hates the new baby: "The mother ties a string around that little one's bed and sat on its face." She sings a rhyme:

The mother gave him no dinner,
She put him to bed,
And sat on the cover,
On top of his head.

The child's attitude toward the newborn is not conditioned by rivalry alone; behavioral observations show that the hate is also conditioned by envy. The young child who has already experienced the difficulties of life, desires to be a little baby which does not have to worry about anything. We present a very instructive record taken from a 4-year-old boy (V.C.):

> Do you know what I play to be when I'm in bed at night? I play to be a little baby. Do you know why? 'Cause people take good care of little babies. Of course they don't have as much fun as grown-up people 'cause they are so little and can't walk or have knives to eat cake or anything, but they do get taken care of. I used to want to grow up to be big—that's what I used to play at night in bed, but I'm going to grow up anyway, so I don't think about that any more if it's going to be anyway. So I think about if I was a little baby. If I was, I wouldn't have to do some things I don't like to do, and if I got shooted by a gun I would be dead but I wouldn't know why about it, because babies are so little, little that they don't *know* about things. They are just small and eat and sleep and never have to worry. So I play I am a baby and do not have to do things for myself or worry.

Rivalry and envy may lead to the ambivalent attitude of hate and love toward the same person. The polarity of love and hate is only one expression of a basic dualism in the child's conceptions. In one of her stories our little artist expressed her concept of duality:

> Mrs. X. had two stoves, and she has two wash basins—and she has two houses, and she has two worlds. They're the same! Every one of her things are just alike—because she has a present that's as big as her and that looks like her, and they're twins.

Our child indicates the reason for her concept of duality. It is the present (of Santa Claus) which the mother has in her womb: the little baby that looks just like her. The child experiences the duality related to birth also in the outer appearance of the mother—"she looks awful, no, she looks beautiful." When the child draws the mother she makes a caricature of her (Figs. 26, 27), but in her drawings of a lovely queen she gives a wish-image of her mother (Fig. 35). Birth means to the child that something living grew up in the mother, something that was a part of herself and at the same time another being. The child experiences this duality very well in her own personality. The world of dreams is part of oneself and at the same time independent of the dreamer. If a child does something by an inner urge which is forbidden, such as masturbating or lying, he feels that inner urge as an alter ego. Many children, when asked why they did a forbidden thing, answer: "I didn't do it, it happened by itself." This is not necessarily an act of denying or deceiving. The child may honestly have this feeling: Not I did it, it did it. It seems that the child, before the development of the ego or the subject, has the feeling of being an object, led by something in him that is bigger than himself.

The many apparently unrelated drawings and associations now form a whole picture. We understand the discouraged child's identification with Cinderella, we understand her escape to the animal world.

Ellen's behavior development, corresponding with her psychological development, can be divided into five phases.

FIRST PHASE

The child notices the transformation of her mother's appearance and feels that something important is hidden from her. The mother has not shown as much love for the girl as before, because she has not been able to carry her any more, to allow her to sit on her lap, etc. The child, feeling unjustly treated, escapes, disillusioned by the world of adults, to the world of animals. Representing her wishes of how she would like her mother to be, the girl plays being an animal mother.

SECOND PHASE

The child tries unsuccessfully to see what the mother hides from her. The wish to see becoming the main problem, the child draws eyes as an expression of her dominant idea. Identifying herself with animals for several reasons, that animal whose eyes are most expressive is preferred. The child draws cats, emphasizing their eyes. Hearing that the word for herself, "I," sounds equal to the word "eye," the child identifies the eyes of the cat, or the cat, with herself.

THIRD PHASE

With the birth of the baby the child is relieved of uncertainty. But as the mother, occupied with the baby, now has still less time for her, the child isolates herself, observing the strange behavior of her parents. Anxiety is replaced by critical observation. The cat still remains the preferred animal, but now the emphasis on the eyes is shifted to the ears. The ears are drawn in the same way as the child draws her mother's hair-knot. The drawings of the cat represent a wish-image about herself and about the mother as she would like her to be.

FOURTH PHASE

The child feels more and more that the baby is a rival whom she hates. The child's isolation increases; she recedes into a private world, in which she tries to solve her problems. Material from fairy tales is taken to express her problem: how the baby is born, why the baby is born. Having heard that the father gave the baby to the mother, the child curses the father. The father's baby present becomes comparable to the presents which are brought by Santa Claus; his way through the chimney becomes applied to the baby's supposed arrival; "chimney" becomes identified with "stove"; the birth of the baby is imagined like the preparation of a pie in a stove, like the preparation of a birthday pie.

FIFTH PHASE

The child becomes objective toward her own fantasies. She becomes more secure but dominant. While her former attitude was an escape, even when playing with other children, she now is asked by another child: "Will you play with me?" and answers: "Yes, if you play what I say." The following record shows her increased self-determination and dominance:

ELLEN: "I don't like Jane, she knocks me down."
OBSERVER: "Why don't you try to be friends with Jane?"
ELLEN: "I will try to be friends with Jane, next time I'll knock her down first."

Instead of showing her former identifications she now says occasionally: "Let's pretend I'm a baby doing this." She now says of her own stories: "That is not a real story, it's only a fairy story," or, "My story is an old pooh pooh story. When you say pooh pooh it doesn't sound interesting, does it?"

The child in this stage has developed a nucleus of her self. The concept of the ego has crystallized, and now she not only becomes able to separate reality from imagination, the "real stories" from the "fairy stories," but also to separate her emotional drives from her mental intention. An interesting record illuminates this phase. She tells the nursery teacher a story of a little girl who did not obey:

> She never obeyed till she was very big. She didn't stop disobeying even when she was as old as you are. Isn't that naughty? You stop disobeying, don't you? Well . . . I'm . . . getting pretty strong so I'm getting to be a pretty good girl . . . never disobey very often. . . . I should have tried with all my might but I simply don't know how.

Differentiating her self from the former diffuse stage, this differentiation also becomes applied to her environment. Mother and father represent two different worlds. The child explained to her father that she was lucky that in their family there were two grownups and two children, so that she could belong to the father and the new baby to the mother. The birth of the baby is no longer a dangerous mystery stirring up emotional reactions in the child. She sees the birth of babies as a phenomenon of human development. She says: ". . . and the mothers and the mothers and thousands of years . . . to the end of the world. There must be something hard at the end of the world because if you could see through it wouldn't be really the end." Now she no longer imagines herself as an animal mother, but as a real mother, and dreams of marriage. She makes a drawing, explaining: "These are the pants and the coat that Bobby is going to wear when he gets married, this is what men wear [wing collar]." And she explains the next drawing: "The person who gets married to Bobby is going to wear this [veil, bow, dress]." When the observer asked: "Who is going to marry Bobby?" the child made a new drawing of a veil, a rose with bobbie pin, and wrote her own name in the veil.

Our case is interesting for the problem of consistency in personality. On first glance such a consistency is not obvious. Form and expression of the child have completely changed during one year, but with a bird's eye view of the different forms of expression we recognize a basic pattern from which the child's different attitudes in all phases can be explained. Thus the focus of observation must be wide enough for recognizing identities and relationships of features which become apparent if the total expression is perceived and understood.

A LITTLE BOY'S HATE AGAINST THE NEWBORN BABY, REALIZED IN AN ESCAPE FROM REALITY

In George, a 4-year-old boy, the same stimulus—namely, the birth of a baby—determines the child's dreamlike fantasies and associations. But in this case the child's reactions are just the opposite from those of the preceding case.

The main motif in George's first drawings is "chickens coming out of eggs." The child says, "A good chicken is in the middle." This chicken is sitting on white eggs while the other eggs are blacked out. The child explains this as "good eggs and bad eggs." One drawing (Fig. 38) shows "my great big chicken; it's bigger than the nursery school." The great big chicken looks like a totem animal.

All these drawings are birth fantasies. As was shown by inquiry, the mother did not tell the child that she was expecting a baby, believing that the child was not interested in this problem, as he never asked questions about it. The pictures, however, are such questions. At the time when the child drew "chickens coming out of eggs," he also drew "a horse and a cow inside a rabbit" and "a fish in a mountain." In this case too the rabbit is a symbol of birth, like a primeval mother who has in her womb a horse and a cow. A similarity to primitive imaginings appears in the child's concept of birth, represented by a mountain which, the child believes, encloses the water out of which the fish is born. As the child does not get an answer from his mother, he prays to his totem animal, "My great big chicken, it's bigger than the nursery school," because this animal, laying eggs, should know the answer to the secret of birth.

A picture series done two months later is accompanied by the following associations (Fig. 39):

> A little doggie [4]—see, a little boy is holding the doggie [6]. Ears and his tail. Look at his tail. Guess what's coming now——
>
> The man in the moon. Really isn't a real man. See the man in the moon. It has ears just for fun. A little hair. See his head. He didn't have no belly—just a head. [Makes the ears bigger; adds more hair (3).]

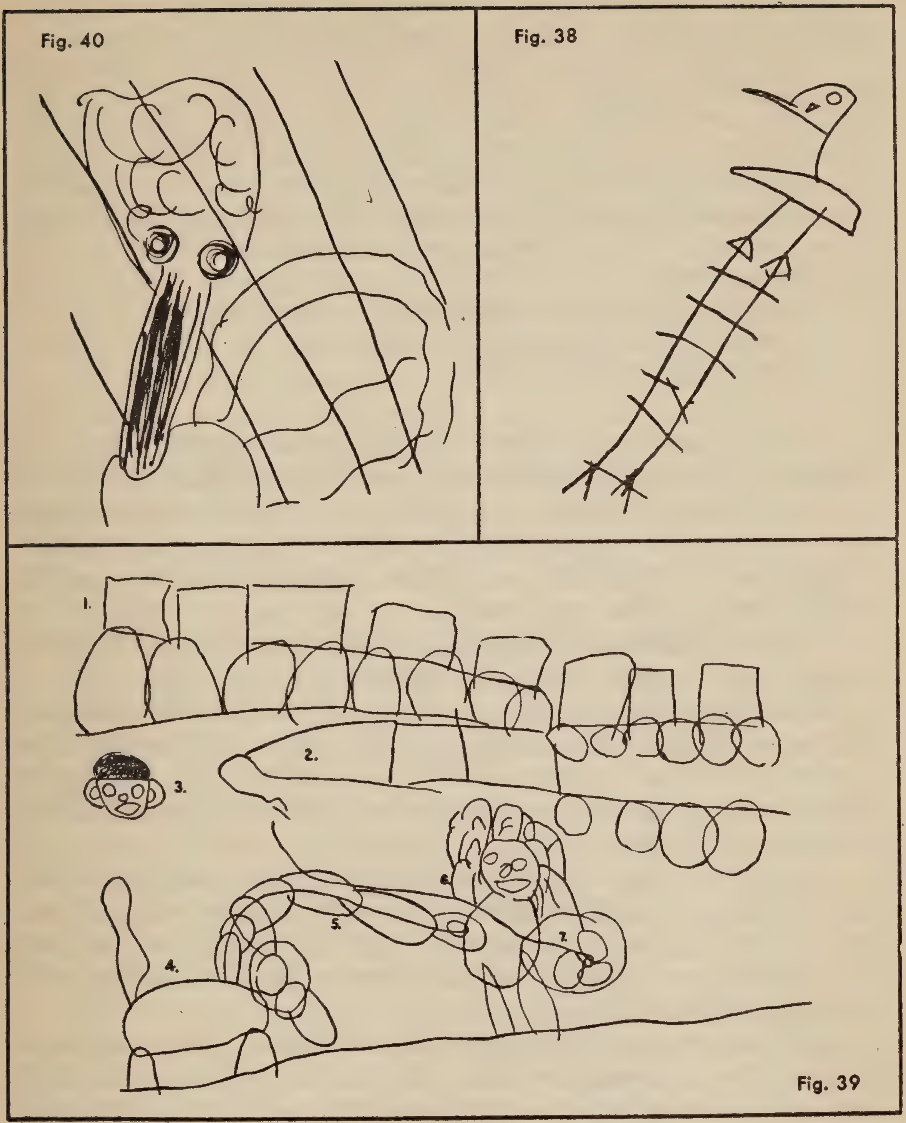
Fig. 40
Fig. 38
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Fig. 39

Figs. 38-40. A Boy's Aggressive Fantasy Against the Newborn

It's not the lady in the moon—no long hair. [Continues to draw more and more hair.]

[Starts to draw a little boy, then changes him to a girl by the addition of hair.] This is a little girl, 'cause this is long hair. The girl is holding eggs.

[Silent for a long time after he starts the next picture, Fig. 40.] Look at this big animal—with a big nose. He's in a cage. He's a bite animal. He bites. See these big lines. They're the cage—so he can't get out and bite. He sticks those things out. He wants to get people. He's so big he has to have such a big cage. He sticks his tongue out. Oh, here's water—he drinks. Those are his nostrils. He sticks his tongue out. He eats hay. See all the hay he's eating. He's getting bigger and bigger. He spits at the hay at this side—through the lines.

[Works silently.]

Look, this is a big motorcar. What a lotta pictures I made you.

This is all done now [beginning to get tired].

Clip them all together like a book.

In the first picture of the series George draws "a little boy . . . holding the doggie." This seems to be a self-representation which is confronted with something very different: "Guess what's coming now—the man in the moon." The man has these characteristics: "Really isn't a real man. . . . It has ears just for fun. . . . He didn't have no belly, just a head."

It seems important that both the man and the boy are, by addition of hair, changed into female beings.

Since the child's imaginings are rooted in his immediate experiences, we suppose that the picture of the boy is a self-portrait, the picture of the man a representation of the father. The child seems to express a grave criticism against the father, which we may interpret in the following way:

Just as the man in the moon is not a real man and has no ears and no belly, so the father "isn't a real man" because he is not present for the boy; he "has ears just for fun" because he does not hear me; "he has no belly, just a head" because he does not play with his boy, and only thinks.

A family exploration indicated that the father, a very busy man, had no time to occupy himself with the boy. He was described as easily disturbed by the boy, to whom the mother frequently said, "Don't disturb daddy, daddy has to work, daddy has to think." The father did not play with the child, nor hear what the child told him.

The next important representation is the change of father and boy into girls. The association of eggs, which the girl holds in her hand, relates this picture to the child's birth fantasies which he had expressed before in his drawings of chickens and eggs. Substituting a girl for himself, the child seems to feel himself displaced by a new girl baby. Actually, the birth of a girl, just a few months before the drawing was made, worried the child very much; especially during the time before the birth, great anxieties and disturbances were observed in him. He did not receive any satisfactory explanation of the physical and psychic transformation of the mother, who was, for instance, not able to carry the boy any more. Now the birth of the girl seemed to give a satisfactory explanation in the terms of a child: My parents wanted a girl. I'm a boy, thus they have to have another child. If I had been a girl they would not have had to have another child, and I would have been the only child.

If we relate the different associations to each other, the picture-writing seems to say, "See, a little boy," myself, and far away the father, "the man in the moon"; he is never present, "isn't a real man," he does not hear what I am telling, "has ears just for fun." I am replaced by a girl.

The next picture (Fig. 40) and the associations to it support and enlarge our interpretation. Persons and animals, and even objects, which a child draws always stand for the child's inner problems. If the child draws an animal in a cage, he identifies himself with such an animal and feels caged. Now the "child animal" says of himself: "He's in a cage—so he can't get out and bite. He wants to get people. He sticks his tongue out. He's getting bigger and bigger."

The simple translation of this text is: I am in a cage; I cannot get out and bite and get people. I can only stick out my tongue. But I am getting bigger and bigger, I am growing—and then——

The child feels that he is in a cage. Thus he begins to hate people; but all his aggressions still are only fantasies. He is waiting for the time when he will be big enough for a retaliation.

Now we may also understand the final associations of motorcars running on rails, which he draws on his picture of the man in the moon. The motorcars and trucks are limited to going a prescribed way, they cannot move as they would like to, but anyway they are moving forward. With this concept the child comforts himself: I am limited and inhibited from moving and acting as I would like to, but anyway I am going forward, I am growing up, and finally I will reach my goal.

INTERPRETATION OF THE CHILD'S INDIVIDUAL ASSOCIATIONS

The child's pictured associations are one form of his behavioral language. We demonstrated that this behavioral language cannot be understood by the adult without a translation, and in order to make such a translation the adult has to think in the child's terms. Accordingly, we must analyze the child's language of behavior for its roots, that is, for its constituent elements and its motivation. But just as the behavioristic aspect does not lead us toward an understanding of the child, so an analytic procedure is not adequate if the analysis is guided by adult standards. This is to a large extent the case in the psychoanalytic interpretation. Psychoanalysis has grown out of an interpretation of adult behavior, and most psychoanalysts have applied their observations directly to analysis of the child without considering that adult and child have different mental structures. There is no basis on which to assume that manifestations which have, for instance, a sexual connotation in the adult, have the same sexual motivation in the child even if they appear to be similar. What would be termed as aggression or sadism in adults need not have this meaning in the child. Behavior which is definitely neurotic in an adult may be perfectly normal for a child of a certain age. The behavioristic and the psychoanalytic approach are both methods which consider the child not as a child but as a small adult. However, both methods combined—that is, careful observation of behavior and the attempt to interpret it—lead to an approach which the author calls "expression analysis." The child's various forms of expression, such as his play activities, dreams, drawings, associations, etc., should be observed and compared with each other, and from such a comparison the observer may reconstruct the missing links, which will lead him to an interpretation from the viewpoint of the child.

An analysis of children's drawings appears to be similar to an analysis of dreams, since children's drawings are pictured associations. The drawings show characteristics similar to those of dreams: strange relationships, condensations, transformations, etc. We therefore interpret children's drawings as graphic dreams. The basic motivations for these graphic dreams are also similar to those of real dreams, namely, wishes and fears. The child draws what he wishes to have and what he fears may happen. Both wish and fear in the graphic as well as in the real dream have their origin in a lack of adjustment, and a lack of adjustment is based largely upon a lack of being understood. This lack of being understood seems to have its roots in the fact that the child is surrounded by persons who have developed a self and live in a world with established relationships, while the child, unstable in his relationships, searches for himself in every manifestation.

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Chapter VI

THE CHILD'S FEELING OF SECURITY

Of main importance in the preschool child's personality is his degree of security and balance. The feeling of security is largely determined from without; it is an environmental factor. Balance, as we shall discuss later, is largely determined from within and seems to be a structural factor. A child's feeling of security or insecurity indicates whether he feels happy or unhappy, whether he is isolated or sociable, whether he behaves actively or passively. The child's feeling of security is connected with his emotional stability or instability.(88, 349, 400, 402)

Evaluation of the Home Situation from Children's Drawings

The child's feeling of security is to a large degree dependent on his home situation. Since the preschool child cannot be easily approached by methods of questionnaires and of associations, and since spontaneous reactions appear more freely in graphic expression, we used the following test for evaluating the child's home situation from his drawings. The child was asked to draw his family. The characteristic points of observation in the child's drawing of his family were:

1. The order in which the child draws the members of his family, the spatial arrangement of the figures, and whether the child omits a certain member of his family.

2. The difference of proportions and of forms used for the representations.

Concerning the order and arrangement of figures, it is significant whether the child starts to draw father or mother, whether he draws himself as part of the family or omits himself, and whether he places himself as the first or the last figure or between father and mother. The position of siblings, too, is significant.

In order to get some general information as to how children of different ages would react to this experiment of drawing their family, an exploratory study was made with twenty children in a summer camp at Bard College, in 1944.* The children, who ranged from the ages of 5 to 14, were divided into two groups, the preschool age group (P-Group) and the school age group (S-Group), each comprising ten children. The points of investigation were:

1. whether the children would draw their family complete or leave out a member;
2. the sequence in the representation of father, mother, brothers, sisters, and the child himself;
3. the relative size of the figures.

Searching for psychological factors which might have influenced the omission of a family member or his position in the sequence of the figures and the relative size of the figure, the following questions were asked:

4. Who punishes more, father or mother?
5. With whom do you agree more, father or mother?
6. Do you look more like father or mother?

The following observations were made:

1. Only two preschool children left out a member of their family.

2. Concerning the sequence in the family composition, the father ranked first in both groups in a majority of cases; siblings took mostly the last place in both groups. The cases where the mother ranked first were more frequent in the P-Group than in the S-Group. The child himself was put last more frequently in the P-Group, and less frequently in the S-Group.

3. Concerning the size of figures, in the P-Group the biggest figure was the father; in the S-Group the child himself. The smallest figure in the P-Group was a sibling or the child himself; in the S-Group the distribution was almost equal.

4. The mother was reported as punishing more in both groups.

5. The agreement with father or mother was almost equal in both groups.

6. The similarity to father or mother was almost equal in both groups.

These observations indicate that an omission of a family member appears very rarely; if, therefore, an individual child makes such an omission, we have a special case and we have to look for the motivation.

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* The experiment was directed by Arnold Davis, one of my students.

Repetitions of the same arrangement of figures in later drawings of the family made by the same child may decide whether the distribution of figures is to be considered as an accidental one or as based upon the child's fixed concept of a range of values.

The difference of proportions in the size of figures also has to be checked by repetitions, and furthermore the actual height of each member of the family has to be compared with his height in the child's drawings. If, for example, the child draws his father much bigger than his mother in spite of the fact that in reality both are of the same height, the emphasis on the father in the child's drawings appears to be a psychological and not a realistic factor. The differences in patterning the various members of the family become a valid clue in diagnosing the child's personality if the child himself states the reasons for these differences. In many cases, however, the young child, not being aware of the differences, is not able to do so. The differences of patterning are in these cases only a basis for the observer's projective interpretation. The value of such an interpretation can be checked only by experience.

We give in the following some examples obtained in a nursery school, demonstrating the children's different patterning of their families. The conclusions drawn from these differences coincide with observations of the actual family situation.

One child draws a house and "papa," "mama," and himself. The family is considered as a complete unity protected by the house. The figures have no arms, but they are, like some African sculpture, rammed into the ground (Fig. 41).

A 5-year-old boy draws the family (1-6) with "house" (9) and "cars" (8) (Fig. 42). The "daddy" (1) is much bigger than all the other persons; then follows the "mother" (2), about half as big as the father, but slightly bigger than the child's two siblings (3, 4), and himself (5). After this family group, in which the child puts himself at the end, the child draws himself again (6) with his teacher (7). The drawing suggests that the father dominates at home (largest size), that the child feels that he himself plays the least important role in the family composition (position at the end of the family). After the drawing of the home situation the child draws the nursery school situation. Here the child feels just the opposite; since the teacher has not the prohibiting role, she is drawn small, while the child feels himself big.

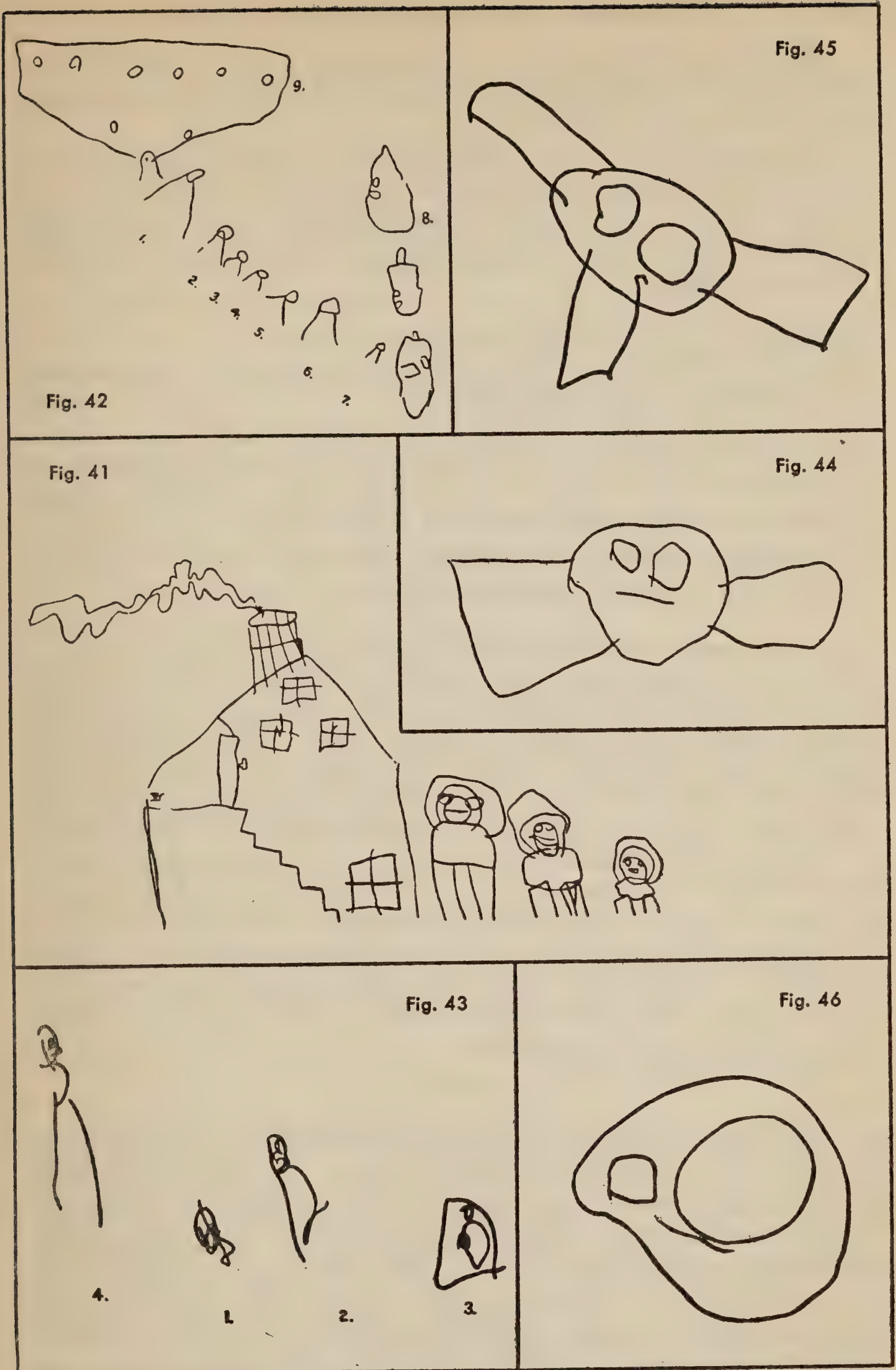
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Fig. 46

Figs. 41-46. Symbolization of the Family

A 5-year-old boy draws first "mummy" (1), then "daddy" (2) and "baby" (3), and then puts himself before all (4), drawing himself as the biggest (Fig. 43).

A 4-year-old boy was at first unwilling to draw pictures of his family, but he showed no reluctance in drawing the teachers in the nursery school. Later, when drawing his family, he omitted drawing his older brother. The child's remarks as he made his drawings were recorded as follows:

OBSERVER: "Can you make your family?"
CHILD: "I'll do the best I can, I'll make my family. I don't know how to make my family. I'll try."

Now it is striking that the child makes the faces of the members of his family with big ears (his mother, Fig. 44, his father with beard, Fig. 45), while he draws the faces of four people in the nursery school without ears but with big eyes (Fig. 46). The child's further remarks were recorded as follows (V.C.):

> I think it will be Humpty Dumpty. Here's my family. Here's my daddy. I'll make his eyes and his ears. See—here's his ears. I know how to make ears. I'll make my whole family. I'll make my mommy, I'll make her eyes. See? I'll make her mouth. She's smiling! I'll make her ears. There's one—there's her other ear. See? I know how to make ears. I gotta draw Evelyn, my maid. Sure, I do. Here's Evelyn's eyes. This is gonna be Evelyn's eyes. Now I'm gonna make Evelyn's ears. I know how to make ears very well. There's Evelyn.
>
> Now can I make my family of the nursery school? I'm gonna make Miss X. But I don't think I can make people's hair. I'm making your ball in the back of your head. That's not very good. I'm making a better head. There it is. Now I'm making your eyes. They're gonna be very funny. Look. Now I'm gonna draw Miss Y. Here she is. 'Cause she is in your office, too. Here she is. Now I'm gonna draw Miss Z. There's Miss Z. Now I'm gonna draw Miss U. 'Cause I only can draw the heads, you know.
>
> I drawed my family, didn't I?

The child emphasizes, in his drawing and in his explanation, the mother ("she's smiling") and not the father. The extreme emphasis on ears cannot, because of its repetition, be considered as accidental. It cannot be a representation of physical reality; it can only be an expression of psychological reality. The child seems to think: "Oh, that my family had ears big enough to hear me!" He wishes he were more noticed at home, while the omission of his older brother in the family picture probably means that the brother should be less noticed at home.

A 2-year-old, when asked to draw her family, drew for "mother" a horizontal line (Fig. 47) crossed by a vertical stroke. For "father" she drew a closed figure with a beautiful curve (Fig. 48). While the representations for father and mother were small, definite forms, she represented her grandmother by covering the whole paper with confused lines, aimed in all directions (Fig. 49). These representations are purely abstract, and here we see a different type of expression, where the representation of a person has no longer the slightest similarity to naturalistic features. The child, as is typical for this age, does not attempt to draw a person, but draws her idea about a person, the outstanding characteristic of the person concerned. The mother is given a crossed line. The concept of a line as a limit or as a route is a basic concept. A crossed or blocked line seems to represent a prohibition. In comparison with the negative significance of a prohibition, the surrounding line, representing "father," seems to express the opposite, a "protection," the positive value of which becomes even clearer if we consider the beautiful swing of this curve. We might easily conclude that the mother is seen as the forbidding person, the father as the protective and agreeable one, with whom the idea of rhythm and swing is related. The grandmother is given uncontrolled and confused lines, and we may believe that the child's grandmother does not know what she wants, but probably she wants a lot and brings noise and movement to the child. Actually, this was the case.

A 5-year-old boy accompanies his family drawings (Fig. 50) with the following remarks:

(1) "There's me—I'm five years old.

(2) "And here's little mum. Mummy's there. She's got pants on and a smile on her face. She's got arms, little ears and hair—and a bracelet and hair."

(3) "Now I'm gonna make a big man; he's smilin'. He's got a great big eye. Has a nose and ears. He's bald-headed.

As simple as the figures are, the expressive value is completely different for each figure. The father is represented only by his big face, with each feature differentiated from the others. The mother is drawn as a complete figure, with head, trunk, arms, hands, and legs all differentiated. The child draws himself without differentiation; the features of the face are confounded, legs are immediately attached to the head, arms are without hands.

We see here clearly that the defective representation of a human figure in the self-portrait is not an indication of a low understanding of reality, or of an underdeveloped faculty of observation, or of a

Fig. 47

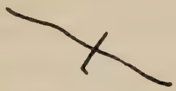


Fig. 48

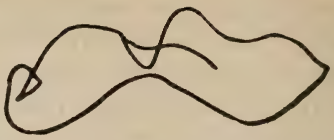


Fig. 49

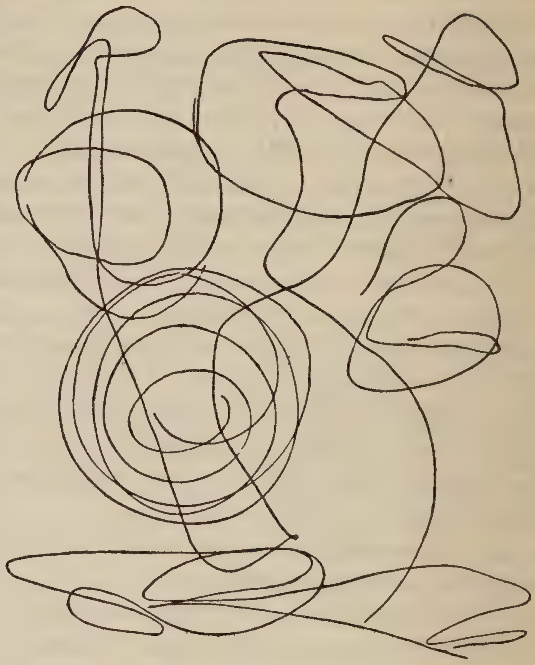


Fig. 50

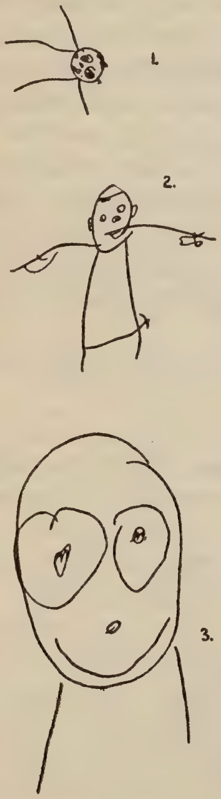
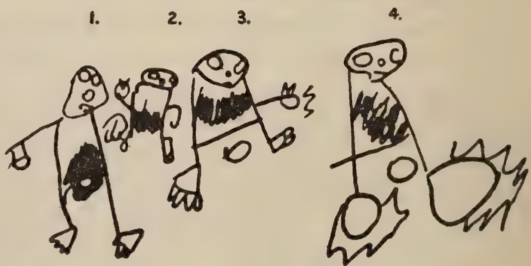


Fig. 51



FIGS. 47-51. SYMBOLIZATION OF THE FAMILY

low intelligence. The drawing of the mother shows that the child knows how to draw a person. The defective representation in the self-portrait seems to be intentional, expressing the child's feeling of himself as small and undifferentiated. Verbally he differentiates the features of father and mother, but he states of himself only his age:

"There's me—I'm five years old."

"Now I'm gonna make a big man. . . ."

"And here's little mum."

Mother is "little," father is "big," but he himself is not yet anything. The child's remarks indicate a happy family situation; father and mother are smiling.

This is not the case in our following example of a 4-year-old boy (Fig. 51), of whom we present the following record:

OBSERVER: "Draw your family."
CHILD: "Oh, ya—mean my daddy?"
OBSERVER: "Yes, your whole family."
CHILD: "Oh, my sister [begins drawing].

> "He's not very big, not a very sensible man. See his nose. See his mouth. That's a silly daddy. See his stomach [1].
>
> [Drawing a smaller figure beside the bigger one.] "This is me [2]. I can't make any mouth for me. Am I a funny squint? I don't want to draw my maid. She's too funny-looking. I'm gonna draw my mother [3]. [He draws a figure beside the self-representation.] This is my sister [4]. See those funny little holes in my sister's nose? See dad's hands—see my two little hands? There's my sister, isn't she a dummy? My sister isn't gonna have two arms, I don't wanna make her two arms. Now I'm gonna make my mother. See my mother's teeth?"

In the child's own psychological interpretation the first figure is the daddy, toward whom the child seems to have some negative feelings. He says (and this is astonishing for such a little boy) that daddy is "not a very sensible man." If the child, drawing himself, remarks, "I can't make any mouth for me," we may infer from the preceding figure of the "silly daddy," who is "not a very sensible man," that the father is the prohibiting person who closes the child's mouth and does not allow him to say what he wants. There seems to be a good deal of aggression against his sister. The child tries to devaluate her features: "Isn't she a dummy?" "I don't wanna make her two arms." He does not want her to do anything. The mother seems to play an especial role. The child tries to suppress the idea of his mother and separates her from the family situation.

Generalizing our observations, we may conclude that the drawing of the family reveals the child's specific attitude toward each member of the family as well as his wishes and fears concerning them.

Evaluation of the Home Situation from Children's Spatial Concepts

A variation of the family-drawing experiment was made in using paper dolls of different sizes. The children usually used for mother and father dolls of the largest size, and both of an equal size, even if there was actually a considerable difference between the size of father and of mother. The baby brother or sister was invariably the smallest; the self-doll was in many cases the same size as that of the parents. Thus, the child's concept of size was mostly determined by psychological, not by realistic, motivations. Deviations from the average were significant; one child, selecting a doll of the smallest size for his father, actually had an extreme lack of respect for him.

The psychological motivation of size also appears in the child's spatial concepts. An analysis of children's drawings, which we shall discuss later (see p. 148), reveals how children express their wishes and fears, their need for protection and aggression by two-dimensional spatial patterns. We designed a special experiment which gave the child the possibility of handling his spatial concepts in a three-dimensional way. We made 50 panels of heavy cardboard, each of them 5 x 8 inches, each panel with a wooden foot on which it stood upright. These panels were used as walls for "the movable house," with which the child, joining the panels to each other, could make large or small rooms. Dolls and doll furniture were provided in different sizes (small, medium, big), leaving the choice to the child. "Wallpaper," "rugs," and "covers" for the tables and chairs were made from different colored papers, to be attached to the panels and the furniture. "Doors," "windows," and "pictures" were painted on paper and could also be attached to the walls. The child was asked to build a room for father, mother, brother or sister, and himself. The aim of this experiment was to study the child's conception of space in its relationship to his family situation. We give the record of a 4-year-old as an example (B.C.):

Observer's remarks:	*Eddie's reactions:*
(Observer gives directions.)	Okay, I'm going to make a house for you. I'm going to make it way big.

Observer's remarks:	*Eddie's reactions:*
(Uses four panels for each side, tries also to put a second row of panels on top of the first.)	Oh boy, now I can make a roof. I'm going to build it again. Have you got any ladders?
No.	
	Can I have all the panels I want?
Yes.	
	All I want, you know, boy, I can make a big house, this is going to be fun. All the little chairs, yeah, and a fireplace, and there is the toilet. Let's see if it opens.
Do you want wallpaper? What color?	Blue and orange and red and green. This is going to be your house. Here's the bathroom. We need paste for the wallpaper. Here's the wash basin and here's going to be the pipes. I'm making your house pretty cute, aren't I?—Oh, yeah, I want orange and blue together on this wall.
(He takes up a floor lamp.)	This is going to be the chimney, all right?
(Whispering:)	Oh, the opening can be the door. It's dark there.—I want blue and red on that wall, and I want green on the other two sides. That's your house and mother's and daddy's and Freddy's [brother] and yours and mother's and daddy's and mine.
(Chooses crib and two beds.)	Here's the bed. Oh, suppose, I have a little baby and this is the baby's bed. Here's the daddy's bed and here's the mommy's.
(Places cabinet near crib.)	I want the chair behind the baby's bed. She's sick and that's for the mommy. She isn't sick now.
(Chooses child's potty.)	Hey, this could be the baby's sink or—it's her high chair.
(Picks up metal box.)	What's this? This can be—ah—the garbage, huh? We'll put it behind daddy's bed.
	Hey, we can make another house for me.
(Chooses fireplace.)	Here's the chimney and here's where the smoke comes out. I can build my fire. We'll put in the mommy bed and she can sleep with daddy.—Here is where the smoke comes out.
(Suddenly:)	Bing, I hit that bad man coming in. He can't take these out of the school, can he. You spank him and kick him in the pants. Here he

Observer's remarks:	*Eddie's reactions:*
	comes again. Bang, he is dead. I shot him with a bebe gun.
	Hey, we need a roof. It's dark here. We need the lights on. It's dark out. I know, I'm the mommy and you are the kids. It's dark out and we have to go inside. I have work to do.
(He turns and says to the observer, writing the record:)	That's enough now.

The child has a large and organized spatial concept. He has a social feeling in making the house immediately for somebody else, and only later for himself. He shows good observation and has definite preferences. His imagination is not stereotyped, but he likes new combinations of colors and objects. There seems to be some aggression against the father, putting the garbage behind his bed and associating in this context the "bad man coming in," whom he shoots. He identifies himself with the mother. A later experiment with the same child (see p. 255) supports our deduction of an aggression against the father and an identification with the mother.

Another child, for instance, has a small and disorganized spatial concept. She chooses a door and tacks a window overlapping the door. She asks: "Where's the door knob? What holds the door up?" She chooses all the colors mixed. The house is first made for herself, and mommy and daddy are not allowed to go in. We see that several inferences on the child's personality can be drawn from his choice of size, space, arrangement of objects, and from his mental projections upon them.

EXPRESSION OF SECURITY IN CHILDREN'S DRAWINGS

Children's drawings can be classified according to the degree of security expressed by the handling of forms, lines, and features.

In the picture of Cinderella (Fig. 2) security appears in the symmetry and balance of graphic elements. However, the strokes themselves are not very determined; they are wavy and sometimes broken, as in the left arm. Contrasting with the balance and proportion of all other graphic elements, the feet are not in proportion but are made insecurely in several attempts. The discrepancy between the security in drawing imaginative forms and the insecurity in drawing realistic patterns seems to indicate that the child does not feel on a secure ground of reality and therefore escapes to the realm of her imagination. This was actually the case.

Fig. 52

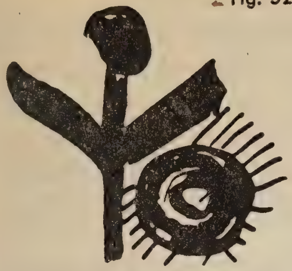
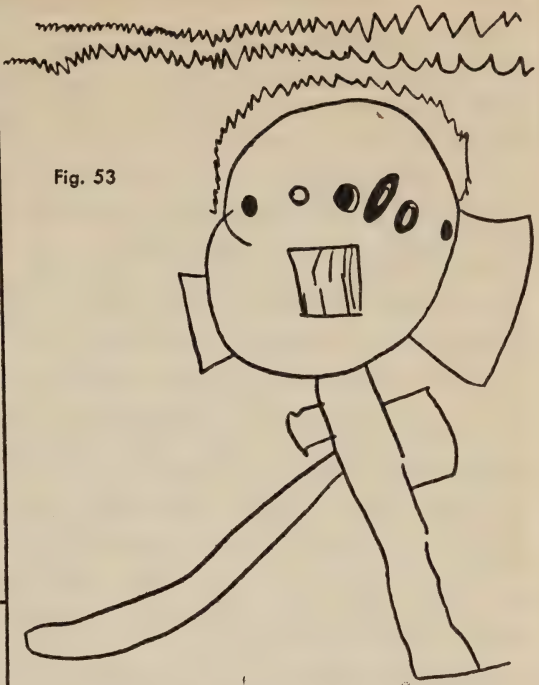


Fig. 53



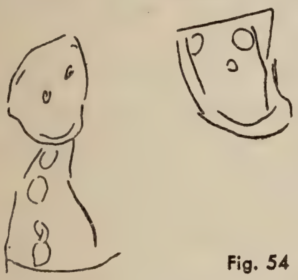
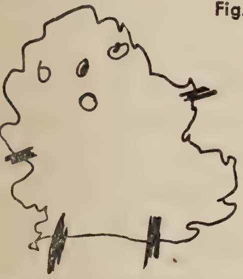
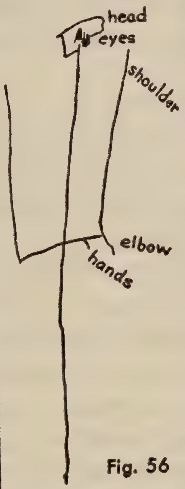


Fig. 54

Fig. 55

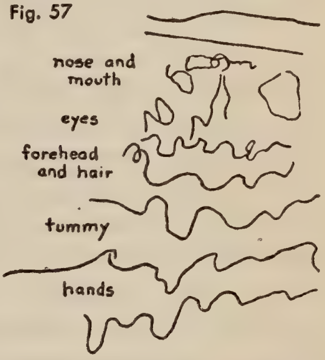




head
eyes
shoulder
elbow
hands

Fig. 56

Fig. 57



nose and mouth
eyes
forehead and hair
tummy
hands

Fig. 58

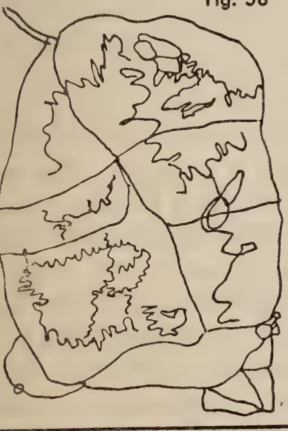
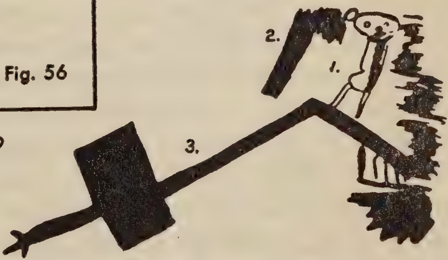


Fig. 59



Figs. 52-59. The Expression of Security and Insecurity

As an example of the expression of a high degree of security, we have chosen the drawing of a 4-year-old boy (Fig. 52). The four elements in the representation of the flower are centered and balanced. All movements reach forward and upward, expressing activity. The strokes are determined and secure, and the grouping of flower and sun in the distribution of the weight of elements is made with security in composing forms.

The expression of security is not related to a correct representation of objects or features. A further example is the drawing of an "Indian" by a 5-year-old girl (Fig. 53). Eyes and nose appear as six spots. Mouth and teeth are emphasized. The hair, as well as the sky over the head, is represented by zigzag lines. But although the representation is poor, all features are made in a determined manner and the weight of elements is distributed with security.

The following group of drawings exemplifies expressions of a low degree of security. This is shown in the representations of a man, made by a 5-year-old boy, with interrupted lines and weak pressure (Fig. 54). In the drawing of a 5-year-old girl a low feeling of security is demonstrated by a lack of proportions, a soft outline, and a continuous change in the direction of movement (Fig. 55). An extremely high degree of insecurity appears when all natural features of an object are indistinct and the natural position of features is confused. A 5-year-old boy, when asked to draw a man, makes the form of a fork (Fig. 56). When asked to indicate the single elements, the child confuses them, drawing the features isolated and not in their actual order. The concept of the body is not realized; its relationships are undifferentiated and confused. In another case of a 5-year-old boy, the drawing of a man shows nothing more than several wavy lines (Fig. 57). When asked for the significance of each line, the child determined them in the following order: mouth, nose, eyes and eyebrows, forehead and hair, tummy and hands. Thus the figure of the man is reduced to several layers, one placed over the other and in a strange reversed position. The expression of insecurity as manifested by the complete dissolution of forms is here again accentuated by an extremely weak pressure. The reversed order of facial features might be explained by the child's looking at grownups, where he sees first the man's mouth, then his nose, his eyes, and finally his forehead and hair, although such a way of expressing the perception is rather unusual in children. The same child, drawing "my daddy in his office," * surrounds the abstract figure of the daddy with a circular line behind a wall, which is

---

* Because of lack of space the illustration had to be omitted.

emphasized by a kind of fence with which it is covered. According to our experiences, the emphasis on surrounding lines, walls, etc., seems to be a symbol of protection. C. Bühler made a corresponding observation with the play technique of children; she found that insecure children prefer to build surroundings and fences.

In extreme cases of insecurity the child's drawing is exclusively determined by surrounding lines. We give an example of this kind of schematism, made by a 5-year-old boy (Fig. 58). The drawing is called "sailing boat" and it was frequently repeated; the schematism appears in a similar way at different times, let us suppose during emotional disorders. Here the insecurity is so high that the representation of each idea has to be protected.

We finally give an example of insecurity as revealed by the content of pictures. If a child draws himself in a defending position with a gun in his hand and shooting at his environment, as in our example of a 5-year-old boy (Fig. 59), this is not only an expression of aggression: it also indicates feelings of insecurity. Such a diagnosis is supported if the child draws not only aggressive but also defensive symbols. In our example the child draws a black wall of defense. This is the same child who, when drawing his family, drew his father twice as big as the other members of the family (Fig. 42). We may assume that the feeling of insecurity is related to the dominant position of the father in the family.

Fantasies of destruction are not necessarily directed against other persons. We have the case of a child who draws other persons with arms and hands, but herself without arms and hands. This 5-year-old girl had developed the habit of masturbation. The mother punished the child, demanding that she keep her hands away from her body; but the impulse was so strong that the child may have wished to lose her hands.

We summarize the most expressive trends in the manifestation of security and insecurity.

High Security	Low Security
1. Realistic or imaginative forms	1. Indistinct and confused forms
2. Balance of graphic elements	2. Lack of balance
3. Centering graphic elements	3. Scattering of graphic forms
4. Determination of strokes	4. Continuous change of direction of strokes
5. Continuity of strokes	5. Interruption of strokes
6. Sharp outlines	6. Wobbly lines

High Security	Low Security
7. Width	7. Narrowness
8. Shape	8. Shapelessness
	9. Enclosures, walls, etc.
	10. Symbols of defense and aggression

THE CHILD'S ADJUSTMENT TO SPACE

In a study made at a Bard College summer camp (see p. 135) we compared the average size in the drawings of a man made by ten preschool children with the average size in the drawings of ten school children. In 70 per cent of the cases the size of the man drawn by preschool children was larger than that made by the school children. According to our general observations preschool children draw big figures rather than small ones, so that a child's expression in small movement patterns needs special investigation.

The child's attitude toward space and size seems to be related to his feeling of security, and it is probable that the child's adjustment to space largely depends on his living conditions. A child who lives in a very crowded home may not have the freedom of movement he needs, although in some cases the close contact with his family may give him an intense feeling of protection. A child who lives in a very big house may have the feeling of being lost and retreat into corners in order to feel safe, although in some cases he may enjoy such vast surroundings.

Since children project their ideas and wishes upon their activities, we may inquire into the child's attitude toward space as shown in his handling of play material and specifically in his use of the paper upon which he draws. The paper on which the child "plays" with his pencil has for him a value similar to that of a playground. If in his drawing the child uses a small area on the paper we infer that he desires a reduced space; if he uses a large area we infer that he desires a large space.

Just as the child identifies the space on the paper with the area of environment into which he puts the figures of his drawing, so he expresses himself in the average size of his figures. Big figures suggest a need of self-expansion, small figures a need of self-reduction. The relationship between space and figures may appear in a fourfold way:

1. Large space—large figure
2. Small space—small figure

3. Large space—small figure
4. Small space—large figure

These relationships seem to indicate the child's feeling of security. In the first case the child's need of expansion seems not to be limited by the environment. In the second case the child has adjusted himself to the limitations given by the environment. In the third case the child withdraws from the environment. And in the fourth case the child wants to break through the limitations set by the environment.

Our observations coincided largely with those made from the daily-life behavior of children; however, the specific handling of the space, the specific structure of the figures, and the content of the drawing had to be taken into consideration (see p. 220).

When giving children paper of different sizes for their graphic expression, we can observe what space is adequate for the child's movement. Paper of small size inhibits the graphic movements of an expansive child, and the movements become cramped. Paper of large size inhibits a child with reduced movements, discouraging him by too big a task. Through a repeated procedure the relationship of movement to the space at disposal gives us a hint of the environmental conditions of the child. If a child with reduced graphic movements is able to adapt himself to a large space, we may conclude that the reduction of movements is not a structural but an environmental factor, that the child has not enough freedom for development in his life situation. If a child with overexpansive graphic movements is able to adapt himself to a small size, we may similarly conclude that the expansion of movements is not a structural but an environmental factor, that the child is overstimulated or not guided according to his structure.

Three sizes may be used for exploring the child's reactions toward space:

(A) small size (5 x 8 inches),
(B) medium size (8.5 x 11 inches),
(C) large size (18 x 24 inches).

The reactions of the child may be:

(a) reduced movements,
(b) adapted movements,
(c) expansive movements.

Thus we have nine possible relationships between A, B, C and a, b, c.

The spacing of figures generally goes with a specific handling of

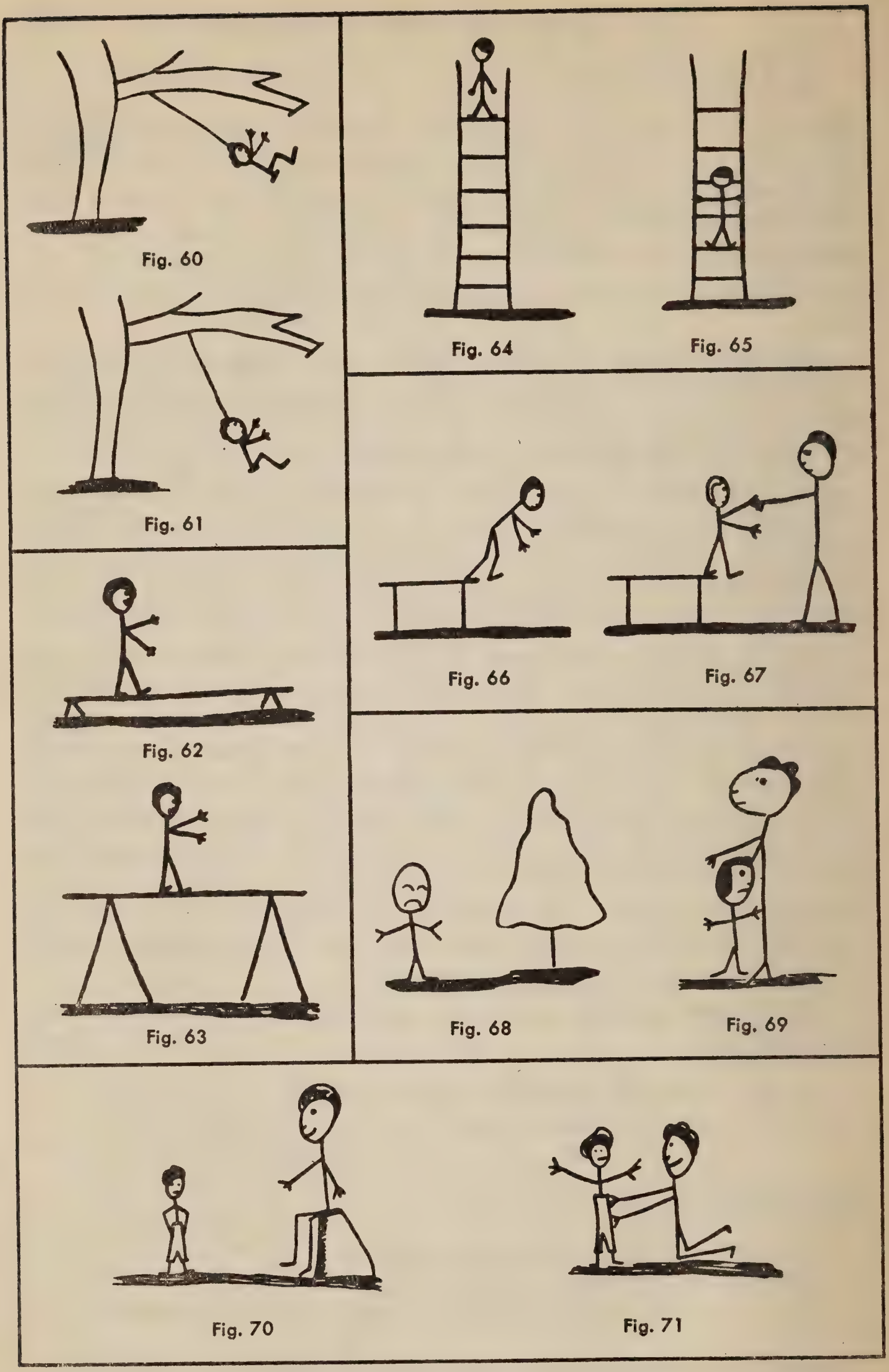


Fig. 60

Fig. 61

Fig. 62

Fig. 63

Fig. 64

Fig. 65

Fig. 66

Fig. 67

Fig. 68

Fig. 69

Fig. 70

Fig. 71

Figs. 60-71. First Security Test

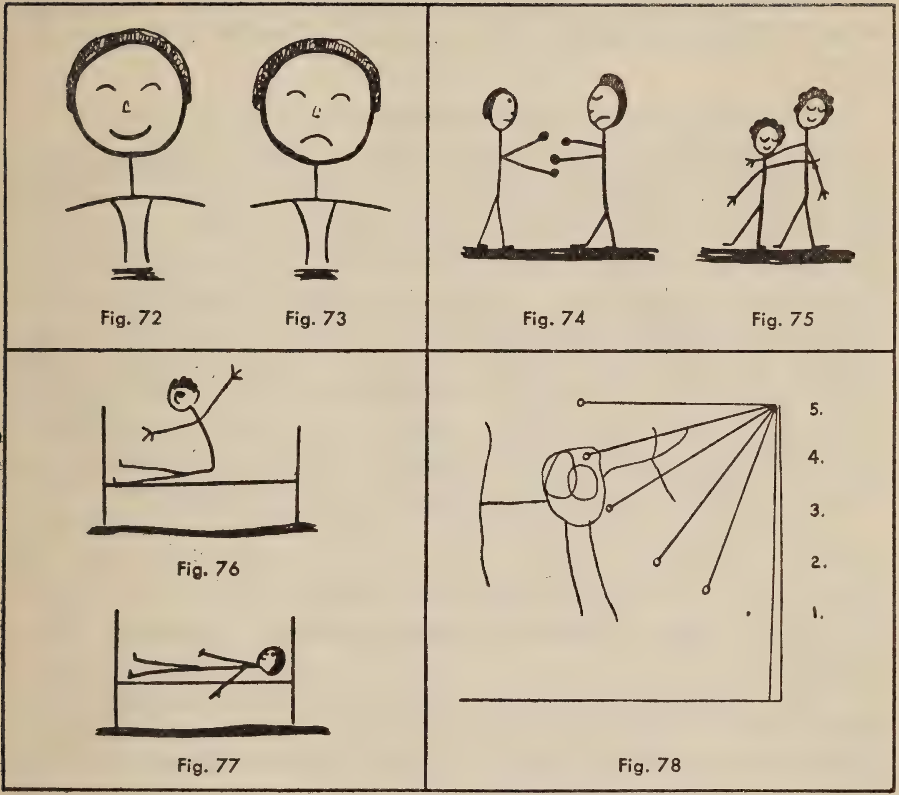


Fig. 72 Fig. 73 Fig. 74 Fig. 75 Fig. 76 Fig. 77 Fig. 78

FIGS. 72-78. SECURITY TEST

the size of paper. Big and broad figures (Fig. 53) usually go with expansive movements; small and narrow figures (Fig. 54) usually go with restricted movements. A child's extreme reaction in either direction is indicative of his degree of security. If he withdraws too much he needs encouragement, because this is a manifestation of a feeling of inferiority; if he expands too much he needs some guidance because of his lack of adjustment. The child's reaction to space indicates the kind of "living space" he needs in his environment.

SECURITY TEST

Appealing to the child's faculty of imagination and identification, we designed a test in which pictures of opposite situations, related to feelings of security and insecurity, were shown to a child, and we asked him for his preference for one situation. The first test was based upon photographs of children's activities, showing opposite behavior attitudes which expressed a feeling of security or insecurity. One week later, the second test was given as follows: Corresponding to the photographs, three pairs of pictures were designed for three concepts, the "high-low unit," the "protection-alone unit," and the "gay-serious unit." Perspective was purposely omitted, so that the pictures were similar to those made by children.

The three pairs of pictures in the group "high-low unit" were stimuli, eliciting as response the wish to be "high," far from the ground, therefore being courageous and unprotected, or to be "low," close to the ground, therefore being timid and protected (Figs. 60-65).

The three pairs of pictures in the group "protection-alone unit" were stimuli, eliciting as response the wish to be "protected," therefore being dependent on other people, or to be "alone," therefore being self-sufficient (Figs. 66-71).

The three pairs of pictures in the group "gay-serious unit" were stimuli, eliciting as response an identification with happiness, movement, love, or with seriousness, rest, fight (Figs. 72-77).

It was assumed that characteristics of a courageous and independent behavior are related to a feeling of security, while the characteristics of a timid and protection-seeking behavior are related to a feeling of insecurity. It was furthermore assumed that a feeling of security in children leads more to an expression of happiness, movement (motor activities), and positive social contacts (love), while a feeling of insecurity in children leads more to an expression of seriousness, inactivity (rest), and negative social contacts (fights).

Each child, sitting at a table alone with the experimenter, saw successively a pair of pictures supposedly related to security or insecurity. The child was asked to select one of the pictures, imagining himself as being in the situations presented. After a week's interval a third test, referring to the same units, was given to the same children, investigating whether their reactions showed any constancy. This test was made as follows:

I. "HIGH-LOW UNIT"

1. *Swinging:* Five converging lines were drawn the same distance from each other, each one higher than the other. The child was told: "This is a swing. Show me how high you would like to swing." He was given a small wooden doll to put on the place he desired. (In a repetition we asked the child to draw a figure on the spot he chose.) (Fig. 78.)
2. *Climbing:* A ladder was drawn on graph paper, five steps in equal distance from each other. The child was asked to put the doll on the place where he would like to climb on the ladder (Figs. 79, 80).
3. *Jumping:* A staircase with five steps in equal distance from each other was drawn on graph paper. The child was asked to indicate from where he would like to jump (Fig. 81).

II. "PROTECTION-ALONE UNIT"

1. *Jumping:* A table was drawn on plain paper. On the left side near the table was a schematic figure, explained as the mother; on the right side there were drawn two trees standing for a garden. The child was asked: "If you were to jump from this table, would you jump to the left side where your mother stands, or to the right side where you can run into the garden?" (Fig. 82.)
2. *Crying:* Two squares were drawn on plain paper. In one square there was a schematic figure; the other square was empty. The child was told: "A child is crying and unhappy. Is he going to the room where his mother is or into the empty room?" (Fig. 83.)
3. *Dressing:* Presents the same room and the same type of direction (cf. Fig. 83).

III. "GAY-SERIOUS UNIT"

1. *Face:* A full face is drawn, and the part where the mouth would be is cut out. A concave and a convex mouth are drawn on a separate sheet; first the concave and then the convex mouth is put

below the hole in the paper. The child is asked which mouth the face should have (Fig. 84).

2. *Profile:* Same procedure as with full face.

3. *Mood in bed:* A horizontal line is drawn covering two vertical lines, representing a bed. The child is asked to put a figure into the bed: "Does he lie down or sit up?" (Fig. 85.)

We give some examples of children's reactions to our diagrams:

LOIS

Lois chooses the highest step (V) for jumping.

LOIS: "I'll draw a man here."
EXPERIMENTER: "Is that where he jumps?"
LOIS: "Yes."
EXPERIMENTER: "Is that where you jump?"
LOIS: "Yes."

The experimenter asked the child how high she would climb on a ladder.

LOIS: "I haven't a ladder; they won't let me climb on one. I had a ladder from a bed, but they got that too."
EXPERIMENTER: "If you had this ladder how high would you go?"
LOIS: "Who's going to make the house for it to be on?" (Draws the man below the ladder.) (Fig. 80.)

The child's last remark indicates a certain fear; but it also may be a refusal to use the ladder as an expression of protest against the removal of the ladder from her room. This child's reaction again shows how children's expressions are determined by associations with experiences.

BRITTA

Regarding the first group, the child used for swinging step IV (Fig. 78), for climbing step IV (Fig. 79), and for jumping step III. She indicated the steps of swinging and climbing by making the drawn figures touch the steps mentioned. It is interesting to note that this child, as well as other children later on, designated as the step for climbing on the ladder not that upon which the feet were placed, but the one which was touched by the head or by the fingers. Britta did not give a face to her figure. When asked by the experimenter where the face of the figure was, she answered: "The face is at the other side" (Fig. 79). While the drawing itself shows a

Fig. 79

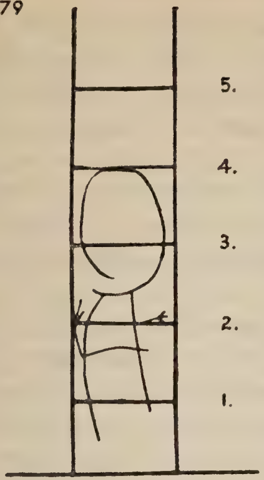


Fig. 80

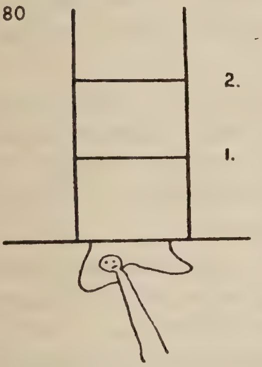


Fig. 81

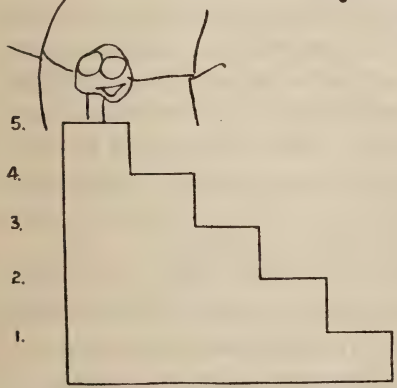
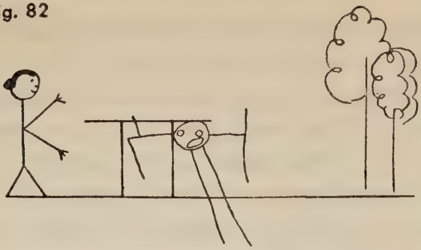


Fig. 82



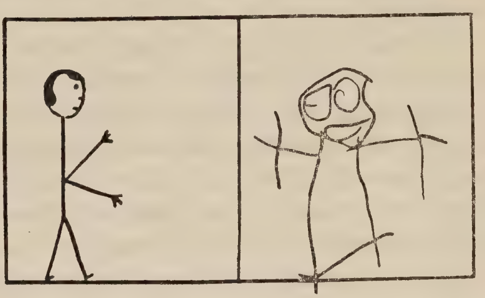
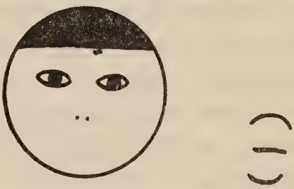


Fig. 83

Fig. 84



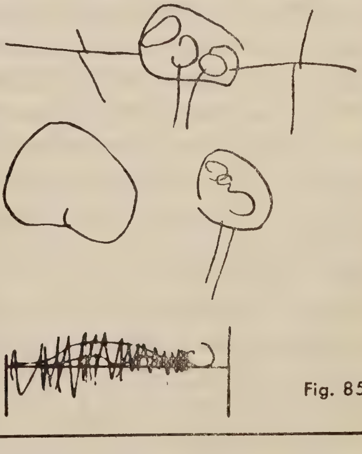


Fig. 85

Figs. 79-85. Second Security Test

rather low level of intelligence, the child's remarks indicate a high degree of observation, thus again pointing to a discrepancy between drawing and imagination. Here as well as in other cases appears a certain consistency between the steps chosen in all diagrams. All the steps chosen are in the middle.

Regarding the second group, the child selects jumping without help (Fig. 82), crying and running to her mother, and dressing alone (Fig. 83). Here too we have neither a high security nor a high insecurity.

In the third group Britta selects a drawn-down mouth for the full face and a straight mouth for the profile. When the experimenter asks why she has selected the drawn-down mouth, she answers: "Because it goes down. Mommy says it's the only kind she likes because it is cute." She explains the straight line of the profile: "Because it has one number, it has one straight line. He goes to the bathroom." The child has not yet realized the position of the mouth within the profile, representing it by a vertical line in the middle of the profile.

Drawing "Mood in bed," she first makes a circle, explaining it as a ball, and two figures, saying: "She plays around with the ball," the two figures indicating the different movements. As a third movement she draws herself lying in bed; she covers the figure by zigzag lines, explaining: "She covers herself" (Fig. 85).

We see again that a drawing which on first glance appears as an uncoordinated scribbling, actually is a picture-writing for coordinated associations.

Correlating the data obtained by the different approaches, we found that each child had a significant predominance (two to three times above chance) of reactions supposedly expressing a feeling of security or insecurity. There were, for instance, children who, in the photograph, in the drawing, and in the graph, chose to jump alone; and there were others who chose, in all situations experimented with, to climb high, etc. There were in the case of each child some items in which consistency did not appear. These items seem to be those which were missing in the life of the child. One child, for instance, showed inconsistency regarding her choice of climbing; exploration revealed that she had never done any climbing because her mother had forbidden her to do so. Considering only the consistent items, the children's reactions were classified into three groups: (1) a majority of positive reactions; (2) a majority of negative reactions; (3) number of positive reactions approximately equal to number of negative reactions. Prevalence of negative reactions was considered to be characteristic of insecurity; prevalence of positive reactions, however, could not, as we shall discuss later, be used as an indication of security. If a nearly equal number of positive and of negative reactions appeared, such a lack of decisiveness appeared as a trend toward insecurity. Using a five-step scale: very secure—secure—middle—insecure—very insecure, the children's consistent reactions to the tests can be compared with the behavior observations made by the workers, especially in extreme cases, where the tests give an indication of a very high or a very low degree of security.

However, before such tests can be of diagnostic value in individual cases, we must know the average reaction of children of a certain age to the different situations, distinguishing between the average reactions of boys and of girls. Since our studies, made with ten boys and ten girls 4 years of age, are not sufficient for a standardization, we only report some observations. It was found that a majority of the boys selected pictures representing security in the situations of "climbing" and "jumping," while a higher percentage of girls selected pictures representing security in the situations of "dressing alone" and "crying alone." (Both boys and girls preferred high swinging.) This seems to indicate that the boys identified themselves more with body activities expressing independence and courage but, on the other hand, with situations appealing for help and social contact. The girls identified themselves more with body activities expressing a need of safety and protection but, on the other hand, with situations of independence from help and social contact.

The general reaction pattern of children must be investigated first and then be taken into consideration when the evaluation of an individual case is attempted. The security test seems to have a promising diagnostic value in cases of children with low scores, which seem to be a definite sign of high insecurity. In the case of children with partly high and partly low scores, the appearance of low scores at all suggests a certain degree of insecurity. When, however, children score high, the high score cannot be taken as an indicator of security since the high scores may not represent real behavior but the child's wishes based upon an insecure behavior. Such a lack of evidence seems not to hold true for the low scores because the low items generally do not represent wish-images. Within such a limitation—that is, using only the low scores as personality indicators—the test furnishes an instrument for diagnosing prevailing insecurity.

EXPERIMENTS IN AGGRESSION

The problem of security and insecurity is closely linked up with the child's emotional social reactions of cooperation and mischievousness, timidity and aggression. The feeling of insecurity frequently is the effect of frustration and may find its outlet in sudden aggression. Aggressive behavior in the form of competition is a normal outlet of the child's emotions. However, a child who lacks the feeling of security exhibits an indirect form of aggressive behavior. He tries to gain attention by sudden outbursts of temper; he has no feeling for cooperation; he grabs the objects of other children and provokes hostility. Projective experiments may indicate the amount and the structure of aggressive tendencies. E. Lerner's(353) train experiment gives some indication of a child's degree of cooperativeness. We performed the experiment in the following way: A long wooden block represented a train track; cubic blocks put at each end of the track were the trains. Child and experimenter sit opposite each other at both ends of the track. The experimenter says: "Let's play train," and he moves his block along the track. The child moves his block. When both blocks meet the aggressive child tries to push the obstacle out of his way, the submissive child withdraws, and the cooperative child tries to go around the opposite train. Julius (4 years and a half), one of our children, said: "I can go right past you . . . see, there's room enough for us both."

Another provocative experiment brought about a similar reaction with the same child. Using building blocks, the experimenter says: "Let's each build a tower and see whose tower is the highest." The aggressive child tries to throw over the tower of the experimenter if his tower is higher than or as high as the child's own. The submissive child gives up his efforts if he sees that he cannot equal the experimenter's accomplishment. Julius, the child just referred to, slowly began to take one block at a time from the floor, saying to the experimenter: "I'll take one, then you take one." The experimenter, following the child's suggestion, built a tower of four blocks. The child remarked: "They're both the same, you have a big tower and so do I."

A new experiment in our series showed that aggressive actions cannot easily be provoked in this child. The experimenter took a picture of a yellow lion standing against a black background; he gave the child a pin and said: "This is a lion, pretend you are a hunter and are going to kill the lion; your weapon is your pin. How would you kill the lion?"

Julius took the pin and said timidly: "I'll kill the lion by putting this pin in his eye."

EXPERIMENTER: "But that wouldn't kill the lion."

JULIUS (sticking the pin slowly in the lion's leg): "I'll poke him in the legs and then he won't have any more left."

EXPERIMENTER: "But he still is not dead."

JULIUS: "I don't want to kill him if he is a good lion."

A new experiment indicated that Julius, not having active aggressive tendencies, enjoys passively aggressive situations. We used two pictures: one of a blond little girl wearing a blue dress playing with a brown-haired boy wearing a white shirt and red short pants; they are both looking affectionately at a little white kitten. The expressive value of this picture is a submissive one. The other picture shows a brown fox, colorfully dressed in red pants and a yellow polka-dot shirt with a white collar and a blue bow tie. The fox is ferociously eating a brown gingerbread boy, who in fright holds his hands over his head. The expressive value of this picture is an aggressive one. The experimenter, placing the two pictures in front of the child, says: "This picture is of a little boy and girl who love each other very much and who are playing with a sweet kitten. This other picture is of a naughty fox who is eating the gingerbread boy. Which picture do you like better?"

Julius immediately replied to the question, "This one," pointing to the aggressive picture, saying, "See, the fox has eaten both the gingerbread boy's legs off."

EXPERIMENTER: "Why do you like this picture better?"

JULIUS: "I don't know, I just like it."

Julius, who grew up in an institution, was continuously inhibited in showing any kind of aggression. Aggression which could not be expressed in overt activities was realized in imagination, and our experiment seems to illustrate this process.

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(Numbers refer to those in the general bibliography.)

Conflicts, instabilities, neuroses

63, 115, 124, 130, 162, 176, 195, 200, 201, 202, 203, 258, 277, 278, 303, 316, 318, 342, 349, 400, 402, 408, 409, 440, 456, 460, 495, 491, 532, 565, 575, 610, 613.

Mental hygiene, therapy

6, 11, 47, 62, 196, 197, 198, 199, 222, 317, 318, 335, 356, 357, 369, 410, 461, 511, 518, 609.

Aggression

See references in chapter II.

Chapter VII

INTELLIGENCE IN THE PRESCHOOL CHILD

Intelligence and Perception

Our preceding investigation indicated a structural difference between child and adult. The child's mental, emotional, and social expressions follow a pattern of his own so that we cannot measure or evaluate them from the standards of the adult. The child's mental expression is more similar to the structure of an adult's dream than to the structure of his thinking, since children's thought is characterized by symbolization, condensation, transposition, and omission of associative links. The child's emotional expression is not necessarily directed toward an object, but frequently is a mere discharge of energies. His social expression need not be manifest in contacts with other human beings but, because of the child's animistic stage, may appear in his relationship to animals or objects.

What then is the main criterion in evaluating the personality of the preschool child? Or, let us ask first, what is the main criterion in evaluating the personality of an adult?

The most important of all factors in an adult's personality is considered to be intelligence. Some intelligence determines all our achievements and activities in life and since man's whole education is based upon it, the factor of intelligence has seemed a main problem in personality.

Some psychologists believe that intelligence is a product of memory. However, it is often found that imbeciles have an exceptional capacity for memorizing numbers, names, and complicated problems, as, for instance, chess problems.

There is another theory that intelligence is based upon an accumulation of facts. But we know that children who learn a great deal at an early age may show a low intelligence at a later time, and that those who appear rather dull occasionally develop into geniuses. In any case we are far from able to construct an artificial genius by merely forcing a child to learn.

According to a third theory, intelligence is a product of an inborn brain structure. This does not imply that intelligence is predetermined, because environment may hamper given potentialities, whereas proper education may stimulate them.

Intelligence is based upon the capacity for discrimination which enables us to establish relationships according to which we react properly. Discrimination, however, is a matter of perception. We made four types of experiments in order to investigate young children's ability to discriminate.

1. The descriptive approach. The child is shown pictures of increasing complexity and is asked to describe the representation. When shown complex pictures containing unfamiliar material, the child merely enumerates all the familiar objects. Julius, for instance, when shown a detailed picture, picked out clouds, birds, trees, but did not mention a canoe, although this object was in the foreground of the picture. The child simply failed to notice an unfamiliar object. When we had explained the unfamiliar objects and had made sure that the child understood them, we took the picture away and asked him to remember the observed objects. The children remembered more of the previously familiar objects. We observed a wide range of individual differences at the same age level.

2. The reconstructive approach. A house was drawn with all the lines disconnected and shown to a child for approximately 50 seconds. When the children were asked what they had seen, some replied "funny things," some said "some letters." Yet, upon showing them the picture for a longer period of time, all children recognized it as a house. When the same picture was shown to college students they all recognized the house immediately. Thus, the adult's ability at reconstruction works much more quickly than that of the young child.

3. The imitative approach. The child had to rearrange colored paper cups in a certain order, which was demonstrated to him first. When the child simply got the instruction to rearrange the cups he did it far worse than when we told him to compare his ability with the performance of another child. In one experiment the child was asked to remember under which cup an object had been placed. The experimenter here followed a definite system: There were always

five cups of different colors, but a sixth cup had always the same color as the preceding one, and it was under this cup that the experimenter placed the object. After a series of experiments in which the same-colored pair of cups had various positions within the row, the child discovered the principle that the object searched for was always under the second cup of the same-colored pair. In one series of experiments the hidden object was a wooden chip, in another series a little toy which the child could keep. We observed that children discriminated better with this incentive.

4. The insight approach. The child's discovery of relationships was the aim of this procedure, related to the concept of number. Colored chips were set up in varying configurations with increasing difficulty. Example:

A.	Orange	Red	Orange
	ooo	oo	oo

Experimenter: "Conny, which two groups do you think belong together?" Conny looked for a moment and then moved the two orange chips over in front of the two red ones.

B.	Yellow	Yellow	Blue
	oo	ooo	oo

C.	Green	Yellow	Orange	Purple	Blue
	oooo	ooo	o	oo	ooooo
	oo	o	ooooo	ooo	oooo
	Yellow	Blue	Orange	Red	Green

With this group the children were slower, but all were again able to group the chips according to number, moving the two yellow chips under the two purple ones, and so forth.

Not all the children had yet "learned" to count, but they recognized by themselves the number scheme underlying the grouping. When the experimenter asked: "Why should those two groups be together?" most children answered first: "I don't know," some said, "They look better that way," one remarked, "They keep company," one, "They fit." Only after several trials did the children understand that they grouped according to number concepts:

EXPERIMENTER: "Why did you do that?"

TOMMY: "They look nice."

EXPERIMENTER: "Why do they look nice?"

TOMMY: "There are both three—that's why they look nice."

It was only after several trials that the child understood what he was doing, his activities developing from a spontaneous insight to an act of awareness. We observed that many children could handle only lower number groups, getting confused with configurations of groups over four. The intelligent reaction is here closely related to perceptual abilities. The perceptual ability is increased if the object perceived becomes meaningful, either by familiarity (experiment 1), or by adaptation (experiment 2), or by an incentive (experiment 3), or by practice (experiment 4).

The fact that young children show an inability to distinguish small differences in sensory qualities has been explained by an immaturity of their intelligence. Binet measured the child's ability to discriminate by his intelligence tests. Discrimination of size (length of two lines) appears normally with the 4-year-old, discrimination of color and weight with the 5-year-old. However, our experiments indicate that the ability to discriminate may appear at a much earlier time but only with a concrete frame of reference. The child's abilities must be measured and evaluated in terms of the child's perspective. Young children usually are not interested in the discrimination of sensory qualities. It is therefore hard to decide whether they cannot perceive because they will not, or they will not because they cannot. In one of our experiments on color perception by means of a tachistoscope where the child perceives a color for a fraction of a second, the child's responses to different colors frequently were always the same. Even when the experimenter explained that there were other colors present, the child insisted that he always saw the same color. This may be due to the child's tendency toward repetition and perseveration, to a lack of interest and cooperation, or to an emotional interest in one specific color, and not to an actual inability to discriminate.

THE SHORTCOMINGS OF INTELLIGENCE TESTS

In an attempt to predict a person's intelligence certain intelligence tests have been constructed. The most famous was originated by Alfred Binet. In 1904, the school authorities of Paris were concerned about an epidemic of failures in school achievements, which were always explained by teachers as due to mischievousness and inattention, so that psychologists were asked to investigate this matter. Binet's main finding was that one cannot judge the mental structure of the child from the level of the adult, but that one has rather to explore the child's own level which is characteristic of his particular age. Binet, together with Simon, explored what abilities a child generally has at the ages of 3, 4, 5 years, etc. During long years of experimentation Binet and Simon explored the standard of aptitudes. No single performance of a child could serve as a fair test for indicating his intelligence, but a whole set of performances was indicative if the performance of a single child was compared with the average performance of his age group. In this country the tests were revised after Binet's death.(346, 560)

An intelligence test cannot approach the whole personality but only specific attitudes. However, since an individual needs certain aptitudes in order to be judged as "intelligent" by the average group with which he is living, the intelligence test may give an indication whether the child may be expected to cooperate according to certain group standards.

The limitations in the usefulness of intelligence tests for preschool children are considerably greater than they are for older children. Although in 1925,(211) A. Gesell proposed a mental scale for the first years of life, he warned later, in 1940:(214)

> It would be a misfortune if in an uncritical way we attempted to apply to him the same short-cut psychometric methods which have proven none too adequate for the educational classification and guidance of children of school age. Oversimplified methods of mental measurement rest too heavily on a concept of general intelligence. They cannot do justice to the rich variety of individualities and the diverse growth characteristics of children from 1 to 5 years of age.

The many tests which have been devised to measure intelligent behavior in babies and preschool children(50, 99, 183, 233, 346, 370, 546, 559) do not fulfill their main purpose, that is, to predict the child's future behavior and achievements. P. H. Furfey and J. Muehlenbein(205) found that the predictive value of tests given during the first year is very slight. G. P. Driscoll,(166) investigating the reliability of tests of preschool children in foretelling the I.Q.'s of later years, found an accuracy of 66 per cent. A repetition of the Bühler test gave a variation of scores from —19 to +46 points.(286) What are the reasons that intelligence tests made with preschool children have such a low reliability, as shown by the fact that different observers, using the same method, get different results? Why have these tests such a low validity in predicting a child's behavior?

Our study emphasizes that the child's personality, not being centered, is in a state of fluctuation, although certain consistent patterns in a child's mental, emotional, and social reactions do appear at an early age. For similar reasons psychological tests given to preschool children are frequently unreliable. For instance, a test supposed to measure the same attitude at different times does not measure the same attitude. A child's attitude is not a fixed entity but changes in different configurations. At preschool age a child faced with a strange examiner seems to be more inhibited in his reactions than at school age, when he is accustomed to an examiner. The influence of the environment upon test scores was demonstrated by Updegraff,(576, 577) who tested nursery school children under varying conditions. A student of the present author gave intelligence tests to school children, 10 years of age, under three different attitudes of the examiner: (a) a neutral attitude; (b) a negative, discouraging attitude (authoritarian and skeptical); (c) a positive, encouraging attitude (including the offering of candy). The attitude of the examiner was visibly reflected in the test scores.

But tests with preschool children are also unreliable if they do not measure what they pretend to measure. If the examiner measures motor coordination at a child's early age as a sign of the child's intelligent behavior and compares this score with that of the child's intelligence at a later age, he traces both reactions back to the same root although the significance of motor coordination for the intellectual development is not at all established.

The gravest mistake, however, seems to be that the examiner projects the adult's concept of intelligence upon the behavior of the preschool child without considering that the child, in each different stage of his development, has a standard of his own. The child's intelligence is, as we shall discuss in the following, modified by three basic factors: his emotion, his imagination, and his adjustment.

INTELLIGENCE AND EMOTION

The most decisive factor influencing any evaluation of intelligence is the emotional response which underlies or even substitutes for a reaction which is supposed to indicate intelligence. We shall give two examples of the Stanford-Binet test to demonstrate the meaning of a reaction which is supposed to indicate intelligence, but actually only indicates an emotion. In Terman and Merrill's handbook of this test(561) * we find the following question: "What's the thing for you to do when you are on your way to school and see that you are in danger of being late?"

The answer of an 8-year-old child tested by a student of Bard College† was: "I would go home."

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* P. 98.

† M. Krugman, for his B. A. Thesis, Bard College, unpublished.

Terman and Merrill state:* "Only those responses which suggest hurrying are acceptable."

According to the test, this child would get a minus in the evaluation of intelligence. The test assumes that each reaction of man is a simple response to an insight into conditions given objectively. Modern psychology shows that this is almost never the case. Man answers to conditions not as they are but as he sees them. The child in question might know that if she came too late, she had to expect punishment. Well, it is a natural and intelligent reaction to evade disagreeable consequences, and the degree of evasion can only give us a hint at possible psychic tensions, discouragement of the child, and possible negative influences of environment (school, family, etc.) but nothing about intelligence.

The next question of the test is: "What's the thing to do when you have broken something which belongs to someone else?"

The same child answered: "I would shoot him."

The correct response according to the test is described as follows:† "Restitution or apology or both must be suggested: mere confession is not satisfactory."

The answer of the child is either an aggressive response which would only indicate the child's emotional structure, or it is an indication of the child's lack of moral judgment, thus hinting at her moral standards, or it is simply a "fresh" answer directed against the questioner. The statement of the test, "mere confession is not satisfactory," would be untrue for a child educated along religious lines where confession is the most satisfactory response. Thus behavior which is supposed to indicate intelligence may only indicate a projection or discharge of emotions.

INTELLIGENCE AND IMAGINATION

If we test the intelligence of a preschool child, we have also to consider the intensity of imagination in the child, influencing the response which is supposed to show his intelligence. F. L. Goodenough(224) standardized children's drawings of a man, evaluating the number of features drawn and the degree of their correctness according to reality. Goodenough's measurement of intelligence by drawings is based upon the assumption "that the nature and content of children's drawings are dependent primarily upon intellectual development."* Because children's drawings of objects deviate so completely from our view of objects, it was believed that children draw not what they see, but what they remember of objects, i.e., what they know. If the child's drawing is determined only by what he has seen or by what he knows, it would be determined solely by his memory. However, the child's expression is determined not only by facts but also by his imagination, which is centered around wishes and fears, that is, what he likes or fears to see and what he likes or fears to know. These wishes and fears determine his actions and expression even against his better knowledge.

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* Op. cit., p. 232.

† Op. cit., p. 232.

On the other hand, intelligence cannot be measured in terms of adequateness to reality. Goodenough remarks:† "Knowledge of a fact does not in itself guarantee that this fact shall be shown in a drawing; its importance must also have been evaluated."

Since we do not know whether the child's deviation from reality is due to a lack of knowledge or to an artistic principle of diminishing the unimportant, or whether it is due to an emotional principle of depriving the "animated" figure of certain parts, it is difficult to score the child's product in terms of genuine intelligence. However, a general classification of "high," "low," and "average" intelligence on the basis of all data taken together seems to be very useful for purposes of comparison.

In order to understand the child's motivation for his drawing we have to investigate the associations connected with his expression. In the following experiment the present author studied children's imaginings accompanying their drawings of a man.

IMAGINATION VS. INTELLIGENCE

Fifteen children, 3 to 4 years of age, were asked to draw a man. In single sessions, the experimenter watched each child's drawing and asked him to explain the different elements. We present in the following some records of the dialogue between experimenter and child while the child was drawing. These records reveal why the child deviates from a realistic reproduction in drawing a man.

BETTY (FIG. 86)

BETTY: "I can draw a little girl. She has her mouth open because she eats some food."

EXPERIMENTER: "What kind of food?"

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* Ibid., p. 14.

† Op. cit., p. 76.

BETTY: "Oh, meat. These are her trousers; these are her feet."

EXPERIMENTER: "Her legs are not straight."

BETTY: "Because she is running. These are her trousers, her legs are inside her trousers, it is the wind in her trousers."

EXPERIMENTER: "She has arms, too."

BETTY (drawing hands): "Here it is—thumb, first finger, and other fingers."

EXPERIMENTER: "Here she has only four fingers, and here she has five."

BETTY: "Oh, she can't have two thumbs!" [Counts the fingers on herself and adds another one.]

EXPERIMENTER: "What is she doing?"

BETTY: "She is running and laughing."

EXPERIMENTER: "Why is she running?"

BETTY: "To get to the swing so that no one else will get it."

The record of Betty shows that most of the elements are not made by chance, since they are immediately explained. This immediacy of response strongly suggests that the child's interpretation is not a rationalization of graphic elements made by chance. Proof of a necessary relationship between elements and their interpretation, however, is not possible. Without the child's interpretation the wavy lines of the legs would be considered as a deficiency of representation. Since, however, the child represents the arms by straight lines, one sees immediately that the waved legs are made purposely. If we were to consider this drawing by objective criteria—for instance, by measuring the I.Q.—the child would be ranked very low. The exploration, however, indicates that the representation is far over average, for the child represents a very detailed observation, namely, the wavy shape of trousers during the act of running. The child's associations change as in a dream. The open mouth stands for eating and for laughing at the same time.

RICHARD (Fig. 87)

RICHARD (drawing a man): "That's an unk."

EXPERIMENTER: "What is an unk?"

RICHARD: "Unk is an al. This is a big unk; this is his head, the eyes, nose; this is the mouth."

EXPERIMENTER: "What's an unk?"

RICHARD: "I don't know." [He draws arms.]

EXPERIMENTER: "What does an unk do?"

RICHARD: "He runs."

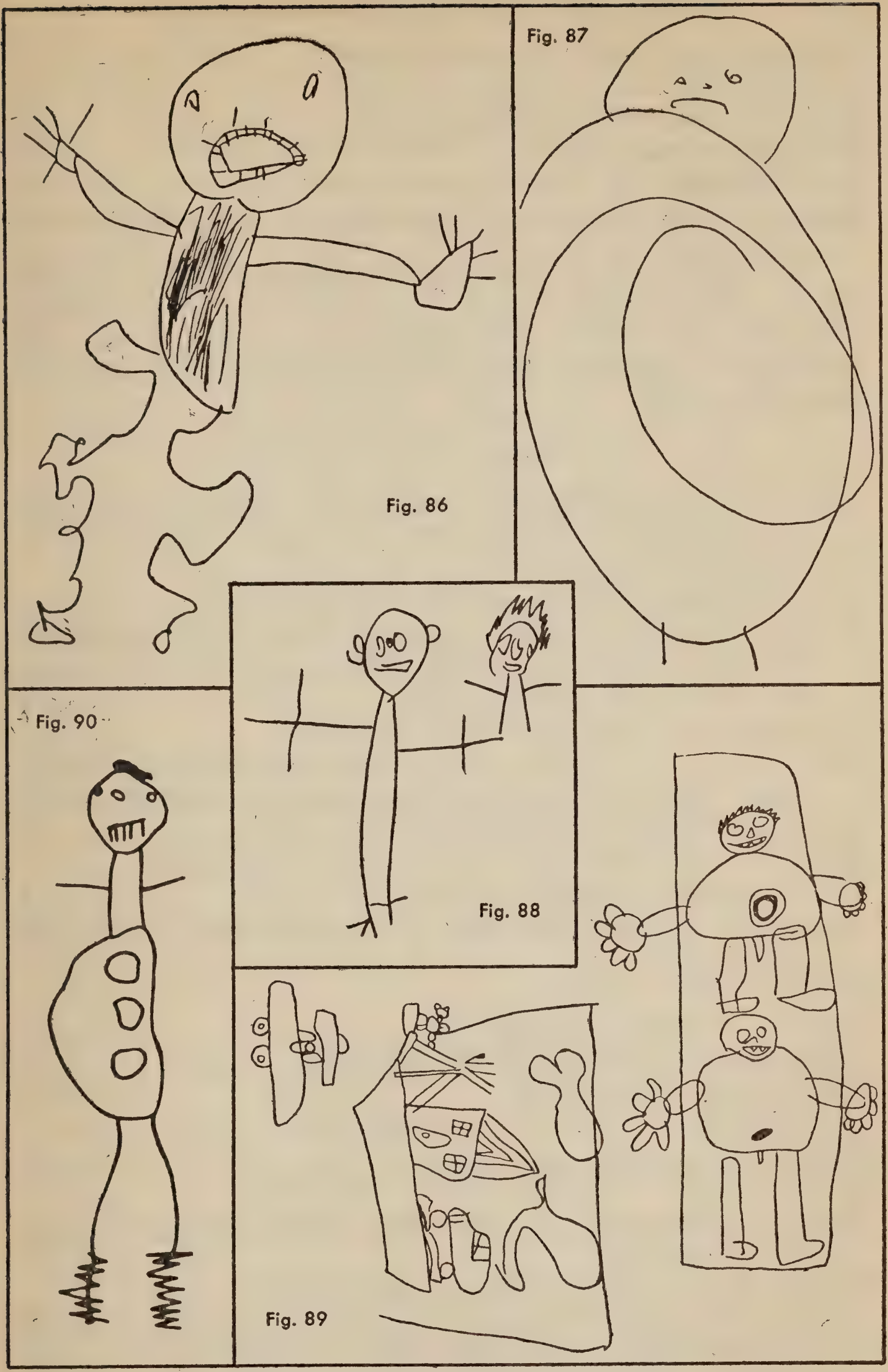

Fig. 86

Fig. 87

Fig. 88

Fig. 89

Fig. 90

FIGS. 86-90. THE DRAWING OF A MAN

EXPERIMENTER: "Have you seen an unk?"
RICHARD: "Yes."
EXPERIMENTER: "Where did you see it?"
RICHARD: [No answer.]
EXPERIMENTER: "Is an unk a good man?"
RICHARD: "Yes. Look at it! That's an unglu. Unglu is a soldier."

This child is much less determined by intentions than the preceding one. His drawing is more in the scribbling stage, without delineating the single features of the body, such as arms and legs. The drawing is an expression of his floating fantasies, which are in an unconscious stage.

BRITTA (Fig. 88)

BRITTA: "I like to draw a man [says so while drawing]. His head, his nose [laughs], he is smiling. His legs. He is going to go in the bathtub. I like him."
EXPERIMENTER: "Why is he going in the bathtub?"
BRITTA: "It's, um, my mummy says, it's, bathtub is far away, and his name is Jack. He is thinking what to do. He has to go to the bathtub. He is three years."
EXPERIMENTER: "Have you a little brother?"
BRITTA: "I don't. I'd like to have a little girl. [Points to the figure.] That is the thumb and his big finger and the little finger."
EXPERIMENTER: "How many fingers have you?"
BRITTA: "I have those many: one, two, three, four, five."
EXPERIMENTER: "He doesn't have five."
BRITTA: "I can make two more; I like better when he has only three."
EXPERIMENTER: "Why?"
BRITTA: " 'Cause I like it that way."
EXPERIMENTER: "How many toes has he?"
BRITTA: "He has three toes."
EXPERIMENTER: "How many toes have you?"
BRITTA: "My mummy says I got six."
EXPERIMENTER: "Why does he have three toes?"
BRITTA: "I like him to have three toes, my mummy says she likes it that way too."
EXPERIMENTER: "Doesn't he have any tummy?"
BRITTA: " 'Cause my mummy says she don't like, so I don't either. [Starts to draw a little girl.] She is just sitting up on a high chair."

The drawing seems to be determined by wish-images, especially to have a little baby sister. The record shows that the child intentionally draws three fingers because she prefers it that way. Also this record indicates that an "objective" evaluation of the drawing would lead to a wrong interpretation of faculties. L. M. Terman(559) reports that 69 per cent of unselected 7-year-old children did not give the correct number of fingers in their drawings although they knew the number of their fingers when they were asked.

JIM (Fig. 89)

JIM: [Draws a man and makes a big square around it.] "This is a man in a square. [Mentions each part when drawing it:] These are the feet, the legs, the body, the head, the hands. I must draw the hands out of the square. These are the fingers [counts to five]. These are the eyes, the nose, the teeth. The belly-button. This is what he peepies with. Now another man. The feet, the legs, the body, the head, the hands. The fingers, the hand, the mouth, the teeth. See, the mouth is open."
EXPERIMENTER (pointing to the figures): "What are their names?"
JIM: "This is Joe, and the other, this is Moe."
EXPERIMENTER: "Which do you like better?"
JIM: "Joe."
EXPERIMENTER: "Why?"
JIM: "Because I do [as he adds penis and navel to Moe]. He has a littler belly-button. Now, shall I make a boat? There is a house in the boat."
EXPERIMENTER: "What is it for? For Joe or for Moe?"
JIM: "Only for Moe, not for Joe. There is not enough room. This is a truck, a sail for the boat, a little tent. He comes out of the tent."
EXPERIMENTER: "Who comes out of the tent?"
JIM: "A little man with big hands. Now I will make a bomber. I will draw it very light so I can erase it off easily. I don't want to see it then."
EXPERIMENTER: [In order to verify, asks again who the figures are.]
JIM (pointing to the larger one): "This is pappy and this is baby."

Here it is characteristic that the child, before drawing his figures, puts them into a limited space. He draws from bottom to top, beginning with the feet and ending with the head. Since he repeats this procedure in both drawings we can see that this succession is an intentional one. It seems to be explained by the child's way of seeing the adults—namely, first their legs, which are on the same height as his eyes (see pp. 8, 146). The child projects upon the figures himself and his father, giving them first fantasy names. The distinguishing characteristics in both are the size of navel and penis. The child likes the figure of the father better than that of himself, because regarding navel and penis the father seems to represent a wish-image. In contrast to this he draws a boat fit only for himself. We may explain this contrast by the dynamics of the child's attitude toward his father, who is loved as a wish-image but disliked in reality. We made the same observation on the occasion of another series of drawings made by the same child. In the present drawing it seems to be characteristic that the child makes himself as big as his father, except for the penis and naval. Furthermore, it seems to be characteristic that the father stands on the boy's head.

Since, as our records suggest, children's drawings are diagrams of associations rather than copies of objects, measurements of intelligence regarding the objectively given data should be confirmed by other approaches. During the act of drawing the child is much more determined by his associations than an adult, who follows a stereotyped, learned pattern If an adult draws a man, he draws first the head, then the eyes, nose, and mouth, or, in similar succession, first the eyes, etc., and then the head; but anyway he would accomplish first a group of features which appear together. Children may proceed differently, as we saw in the case of Jim, and sometimes one can observe a completely scattered way of drawing the details. One child, Ellen, starts by drawing the neck, which she emphasizes extremely. Her record runs as follows:

ELLEN (Fig. 90)

ELLEN: "This is a baby, his neck, he has a big neck, his head, his body, his legs, he wears shoes and socks, these are the toes of his shoes and heels too, now his other sock and other shoe and his eyes and his nose and his mouth. He has little teeth, not much, and his arms and his fingers."

The child draws first those features in which she is emotionally interested; perhaps those features are linked up with aggressive emotions, or they may be items which attract especial attention, such as shoes and socks. That means that the child's drawing is emotionally subjective and not intellectually objective. If we consider this difference between the young child and the adult, we may understand that the child easily omits details in which he is not emotionally interested. Also, a drawing furnishes no basis for making objective judgments from its appearance without considering the process of drawing. Therefore we should like to make a general statement that it is difficult to criticize a picture made by a young child in terms of intelligence or aesthetics without taking a record of how the child made the drawing and what his associations were during his accomplishment.

INTELLIGENCE AND ADJUSTMENT. I.Q. AND R.Q. (Intelligence Quotient and Rhythmic Quotient)

We have already discussed the phenomenon that a child's intelligent behavior is not an absolute, unchangeable unit, but depends on the situation in which it becomes manifest. The intelligent reaction may vary in the same type of test, depending on whether the examiner is liked or disliked. The intelligent reaction may vary with different tests given by the same examiner, depending on whether the test evokes associations which are pleasant or unpleasant to the child. The intelligent reaction may vary with the same test and the same examiner at different times, depending on various uncontrollable factors such as the child's balance or tension, his previous experiences, etc. In short, intelligence depends on the configuration of stimuli in the child's personality within and in the environment without. This configuration depends on the child's adjustment to a given situation. But the child's adjustment to reality is different from ours.

If the child's drawings reflect his adjustment, what is the reason for a child's drawing the head of a figure just as big as the belly? It may be no more a lack of observation than in the case of the child who represented only three fingers on one hand. But how can we prove that patterning forces are here at work? If, for instance, the size of the belly did not have approximately the size of the head but exactly its size, and if such identities of length, or simple proportions, appeared frequently, we had to suppose that the child replaced the disproportions of nature with proportions determined by an aesthetic standard. A. Gesell speaks of aesthetic reactions and expressions of the preschool child as follows:(214) *

> Appreciation of aesthetic experiences is established well before artistic expression. By the time the child is 18 months old he has been responding to music, pictures and rhymes for many months, but his creative experiences are

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* P. 258.

still very limited, with the exception of rhythmic expression and sound play which may come in the first year of life.

When later the preschool child is able to express himself graphically he projects his first artistic experience, namely, that of rhythm, upon his expression. Rhythm appears in repetitions of the same unit, later in alterations of the same unit, and finally in elaborations of the basic pattern. If the child repeats exactly the same size for head and belly he expresses a rhythm, the rhythm of the same unit.

The ability to configure and integrate is at least as important in the development of the self as the ability to observe and retain. A pattern which suggests a deficiency of intelligence to the tester may suggest a high value of personality to the explorer. The drawing of a man as a medium for diagnosing a child's intelligence has its limitations. If, besides, we use the drawing of a man in order to measure the unifying and integrating principle in the child's expression, the principle of intelligence may become more meaningful. The pattern in the drawing of a man would be the result of a child's conscious reaction (knowledge) transformed by his unconscious reaction (configuration).

A measurement of graphic expression in order to investigate the principle of configuration and integration is part of a special volume which the present author has in preparation* and in which he discusses methodological and statistical problems related to this subject. Within the frame of our present investigation we shall demonstrate briefly the principle of measuring the child's degree of configuration or rhythmization, his rhythmic quotient, or R.Q.

TESTING THE CHILD'S RHYTHMIC ORGANIZATION

Using our standard object, a picture of a man, we first measure the general proportions of its three main parts: head, trunk, and legs. The length of the head is measured in its vertical diameter from the chin to the upper limit. The trunk is measured in its largest extension between upper and lower limits. The length of the legs is either given by the length of the vertical stroke representing the leg, or measured from the belt, which is very often drawn by children as a horizontal line separating trunk and legs. In such a case the middle of the belt is taken as the starting point for the measurement. But since each drawing has many graphic elements, a different number of proportions is possible in each single case. To determine such "proportions" we proceed as follows:

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* *Diagram of the Unconscious.*

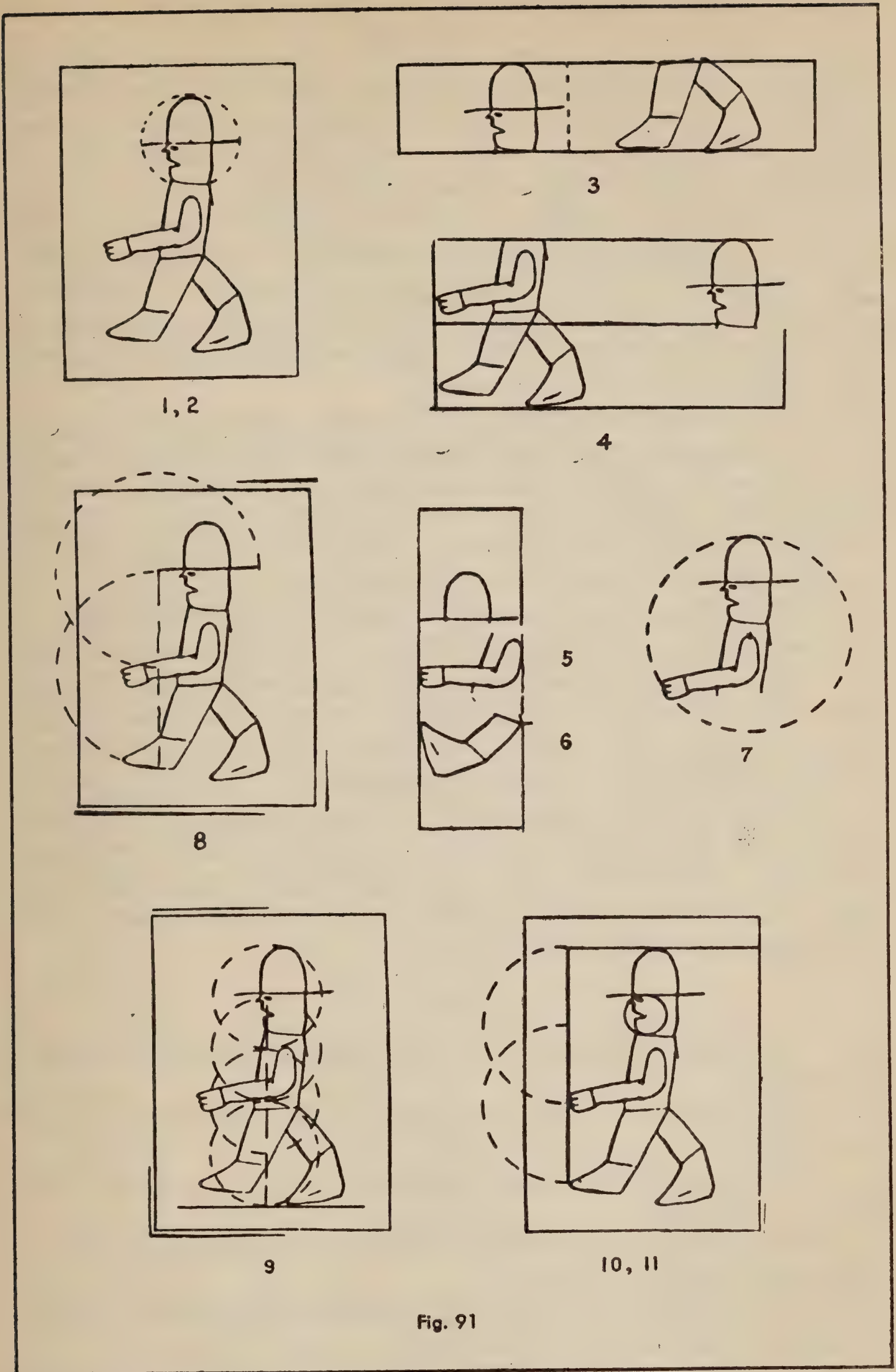
1, 2
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Fig. 91

Fig. 91. Rhythmical Quotient of 91 (High). Intelligence Quotient of 141 (High).

A. We measure the vertical as well as the horizontal length of the different parts of the figure, such as hat, face, trunk, arms, hands, legs, feet. If the length of one item is equal or in a simple proportion (double, three times, etc.) to the length of another item a credit of one point is given to each coincidence.

B. We measure distances between "significant" points of the drawing. Significant are the edges of the figure, its upper, lower, right, and left limits, and the starting points of limbs. If the distance between two significant points is equal or in a simple proportion to the distance between two other significant points a credit of one point is given to each coincidence.

C. We measure distances from the main features of the figure, such as eyes, nose, mouth, and hands, to the limits of the main parts of the drawing, such as limits of the face, head, trunk, legs, feet. If the distance between one feature and a limit is equal or in a simple proportion to the distance between another feature and a limit, a credit of one point is given to each coincidence.

The rhythmic quotient would appear in the relationship of proportions to given elements. Thus we divide the achievement, i.e., the number of proportions, P, by the given elements in the drawing, E. The division P/E, in which we omit the decimal point, gives the R.Q., the rhythmic quotient. We give the following several examples to illustrate this procedure.

Fig. 91 * is a drawing made by a Chinese boy, aged 6.7, with an I.Q. of 141. The drawing consists of 12 basic elements: hat, face, eye, nose, mouth, belly, arm, hand, right leg, left leg, right foot, left foot. Comparing the proportions of these basic elements, the following regularities appear:

A

1. The vertical length of the hat is equal to the vertical length of the face.
2. The horizontal length of the hat is double the vertical length of the face.
3. The length of the head (including the hat) is equal to the length of the legs.
4. The length of the trunk and the legs is double the length of the head (including the hat).
5. The length of the brim of the hat is equal to the length of the arm.

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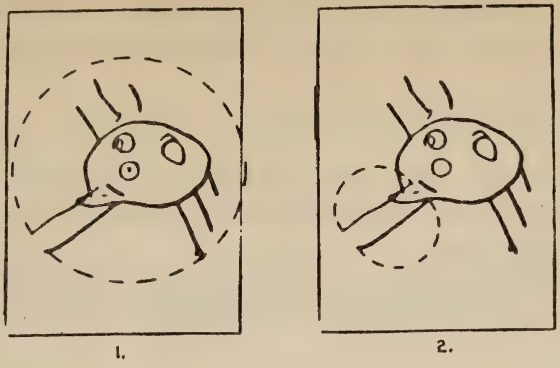
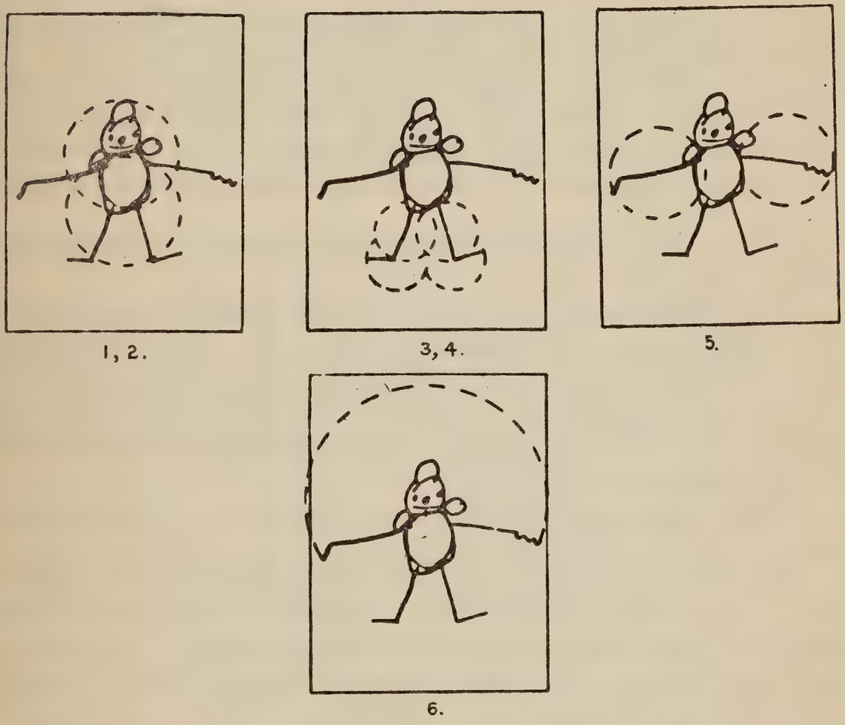
* Fig. 31 in Goodenough, *Measurement of Intelligence in Drawings* (courtesy of World Book Company).



1.

2.

Fig. 92



1, 2.

3, 4.

5.

6.

Fig. 93

FIG. 92. RHYTHMICAL QUOTIENT OF 18 (LOW). INTELLIGENCE QUOTIENT OF 70 (LOW).

FIG. 93. RHYTHMICAL QUOTIENT OF 35 (MEDIUM). INTELLIGENCE QUOTIENT OF 116 (MEDIUM).

6. The length of the brim of the hat is equal to the length of the legs.

B

7. The distance from the shoulder to the upper limit of the figure is equal to the distance from the shoulder to the left limit of the figure (fingers).

8. The distance from the left edge of the hat's brim to the extreme point of the right foot is double the length of the brim of the hat.

C

9. The eye is one center of the figure, demonstrable in the following way: Constructing a horizontal line on the basis of the left foot and constructing on this horizontal a vertical in a right angle which goes through the eye up to the limit of the hat, the length from the eye to the lower limit of the figure (basic horizontal) is four times the distance from the eye to the upper limit of the figure (limit of the hat).

10. The mouth is equally distant from the upper and the lower limits of the face.

11. The hand is another center of the figure, demonstrable in the following way: Constructing a vertical line through the limits of the hand and the edge of the right foot and extending this vertical up to the upper limit of the figure, the distance from the hand to the upper limit of the figure is double the distance from the hand to the edge of the right foot.

Thus, with regular proportions in relation to 12 basic elements we get an R.Q. of P/E = 11/12 = 91.

Fig. 92* is a drawing made by a 6-year-old girl with an I.Q. of 70. The figure has the following 11 elements: head, hair at right, hair at left, two arms attached to the head, two eyes, nose, mouth, two legs attached to the head. The only proportion and regularity to be found are in the length of both legs, which are equal, and in the nose, which is in the center of the drawing; a larger circle around this point embraces legs and left arm. Here the R.Q. is: P/E = 2/11 = 18.

Fig. 93 † is a drawing made by a 5-year-old boy with an I.Q. of 116. There are 17 elements: hat, head, right eye, left eye, nose, mouth, right ear, left ear, right arm, left arm, right hand, left hand,

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* Fig. 16 in Goodenough.

† Fig. 14 in Goodenough.

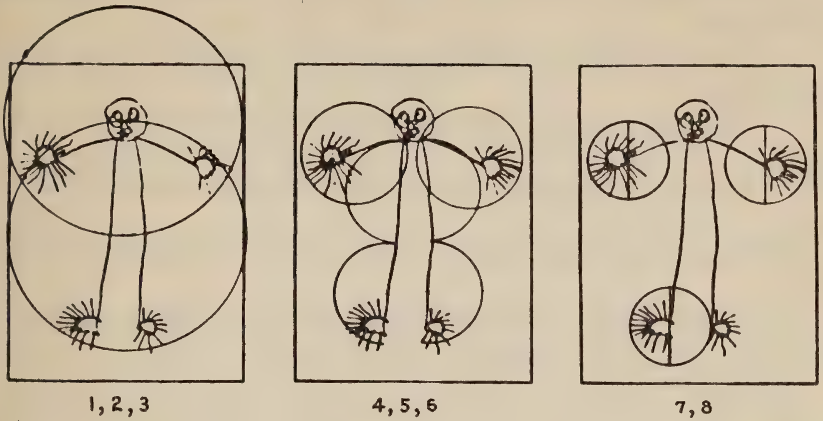

Fig. 94

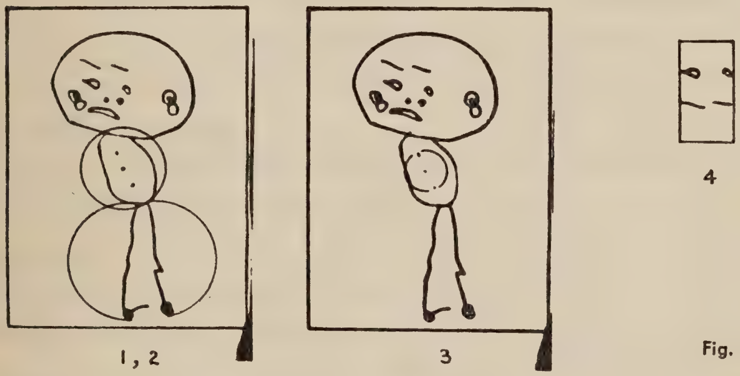

Fig. 95

FIG. 94. RHYTHMICAL QUOTIENT OF 61 (HIGH). INTELLIGENCE QUOTIENT OF 91 (LOW).

FIG. 95. RHYTHMICAL QUOTIENT OF 26.6 (MEDIUM). INTELLIGENCE QUOTIENT OF 129 (HIGH)

belly, right leg, left leg, right foot, and left foot. The following proportions are obtained:

1. The length of the head (plus the hat) is equal to the length of the trunk.
2. The length of the head (plus the hat) is equal to the length of the legs.
3. The length of the right leg is equal to the length of the left leg.
4. The length of the right foot is equal to the length of the left foot.
5. The length of the right arm is equal to the length of the left arm.
6. The nose is in the center of the face, equally distant from the fingertips of the right and the left hand.

The formula is: R.Q. = P/E = 6/17 = 35.

In our three examples just mentioned the highest R.Q. was 91, corresponding to the highest I.Q. (within these three examples) of 141. The lowest R.Q. was 18, corresponding to the lowest I.Q. of 70. The medium R.Q. was 35, corresponding to the medium I.Q. of 116. In these cases the R.Q. corresponds to the I.Q., in so far as the drawing with a high I.Q. also has a high R.Q., and the drawing with a low I.Q. also has a low R.Q.

I.Q. and R.Q. are not in all instances in agreement. There are cases where the I.Q. is high and the R.Q. medium or low, and vice versa. We give an example of a comparatively low I.Q. together with a high R.Q. and one of a high I.Q. with a medium R.Q.

Fig. 94* is a drawing made by a girl, aged 5.4; I.Q., 94. The drawing has 13 elements: head, two eyes, nose, mouth, two arms, two hands, two legs, two feet. The following proportions appear:

1. The nose is the center of the head.
2. The nose is the center of the upper part of the figure (head with arms).
3. The nose is the proportional center of the total figure.
4. The length of both arms is equal.
5. The length of both legs is equal.
6. The extension of both arms together equals the length of the legs.
7. The length of the right hand equals the length of the left hand.
8. The length of the left foot equals the length of the hand.

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* Fig. 71 in Goodenough.

R.Q. = P/E = 8/13 = 61 (high); I.Q. = 91 (low).

Fig. 95 * is a drawing made by a Japanese girl, aged 4.10; I.Q., 129. The drawing has 15 elements: head, two eyes, two eyebrows, two ears, nose, mouth, belly, three buttons on the belly, two legs. The following proportions appear:

1. The middle button is the center of the belly.
2. Both legs are of equal length.
3. The distance between the middle and the upper button equals the distance between the middle and the lower button.
4. The extension of the eyebrows equals the extension of the eyes.

R.Q. = P/E = 4/15 = 26.6 (medium); I.Q. = 129 (high).

If the degree of I.Q. is similar to that of R.Q., this seems to indicate a unified pattern of personality. A discrepancy between I.Q. and R.Q. needs an explanation in terms of the dynamics of personality. But before offering a theory we must know more about the significance of the R.Q.

NATURE AND NURTURE IN GRAPHIC PROPORTIONS

RHYTHM OF AFRICAN CHILDREN

There are three main problems which are related to the concept of the R.Q., namely:

1. Is the rhythmical organization a factor of learning and training?
2. Is the rhythmical organization a factor of our visual experience?
3. Is the graphically manifested rhythm due to an innate factor?

As an approach to the first question, whether the rhythmical qualities are developed by training and experience, we studied some drawings by children of primitive peoples who never had an artistic training. A publication made before we had started our studies grants us an objective procedure, since the drawings presented had originally not been selected with regard to rhythmical manifestations. We refer to the publication of W. Probst: "Les dessins des enfants Cabyles." (481) In the following we give some examples of regularities in these drawings by African children.

In Fig. 96 the following proportions are manifest:

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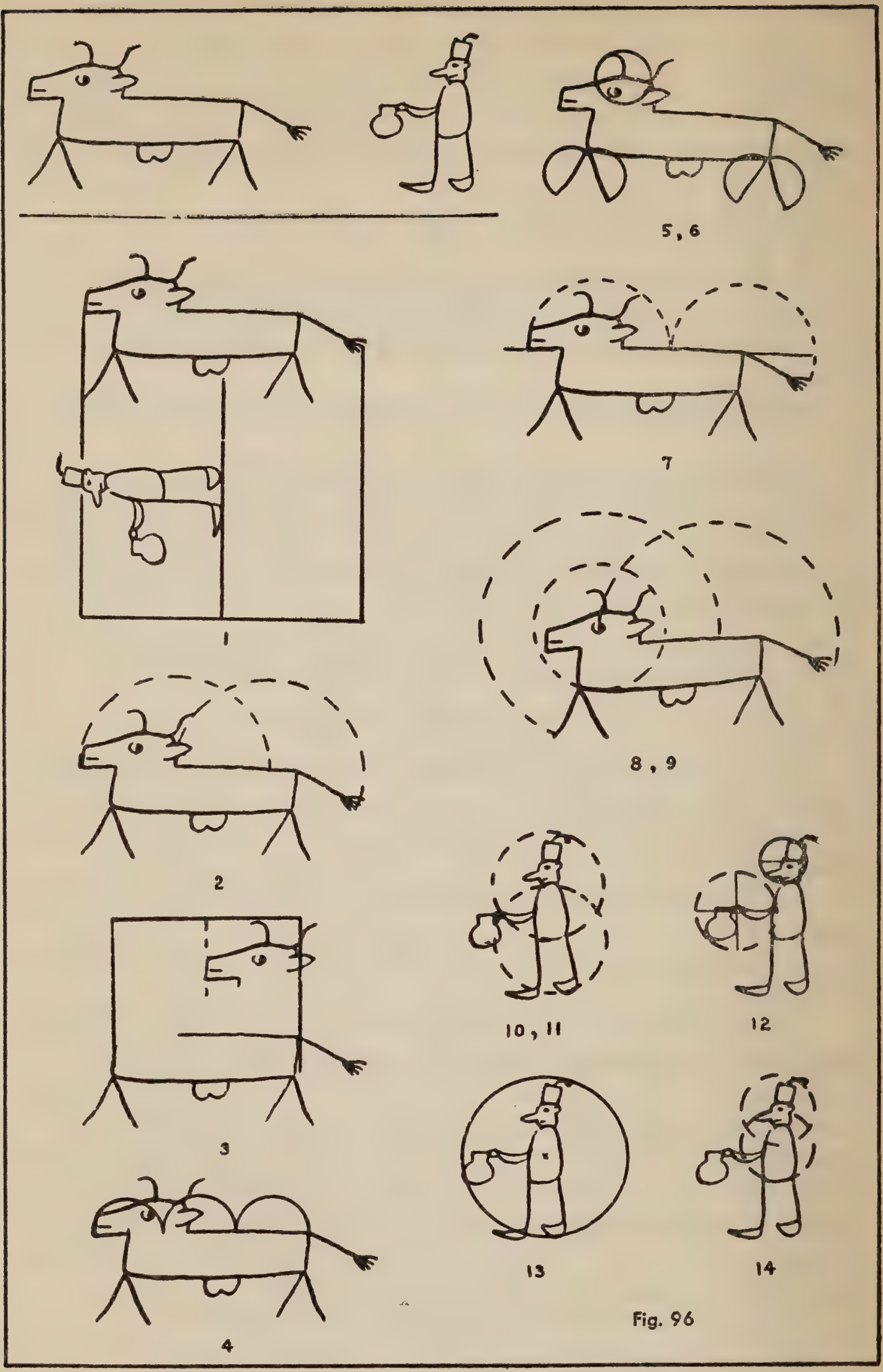
* Fig. 45 in Goodenough.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10, 11
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14
4
Fig. 96

Fig. 96. Rhythm of African Children

The Animal

1. The total length is double that of the man (without hat).
2. The total length is three times that of the head.
3. The trunk is double the length of the head.
4. The trunk is five times the length of the snout.
5. The four legs are of equal length.
6. The length of the leg is double that of the horn.
7. The total length is four times that of the tail.

8, 9. The eye is the center of the head as well as of the belly.

The Man

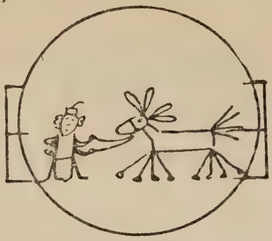
10. The length of the head plus the hat is equal to the length of the trunk.
11. The length of the trunk is equal to the length of the legs.
12. The length of the head is equal to that of the hat.
13. The length of the bowl is equal to the length of the arm (the hand is center).
14. The middle of the belly is the center for the whole figure.
15. The eye is the center for the head and the trunk.

In the following examples, Figs. 97, 98, the eye also appears as a graphic center, which is very significant because the drawing shows the wrong number of human and animal features, which might indicate a negative factor of intelligence. If, however, such a wrong number appears with a certain regularity, e.g., as shown in Fig. 97, where the man has four arms and four legs, and the animal four ears, four legs, and four tails, then such a deviation from reality need not indicate a low intelligence but might express a certain idea of the child. Our observation of the drawings of these African children suggests that the factor of learning and training, which plays a very subordinate role in these children, cannot be considered a basic factor for rhythmic qualities.

THE CONSCIOUS AND UNCONSCIOUS SENSING OF RELATIONSHIPS

A main definition of intelligence is a person's ability to recognize relationships. The recognition of relationships has been considered to be a manifestation of the reasoning power of man's consciousness. Our observation now indicates the presence of relationships which do not depend on a reasoning power but which seem to be the product of an unconscious sensing of relationships. Thus, the power to recognize relationships may become manifest not only in a conscious but in an unconscious way. The observation that a

Fig. 97



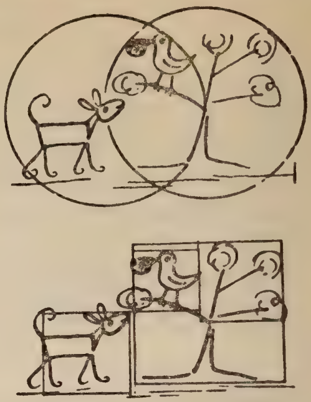


Fig. 98

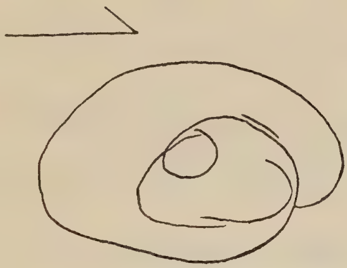


Fig. 99

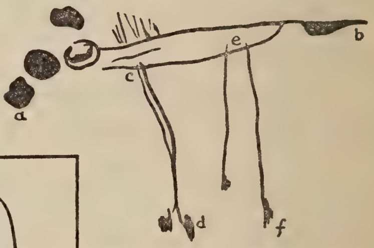
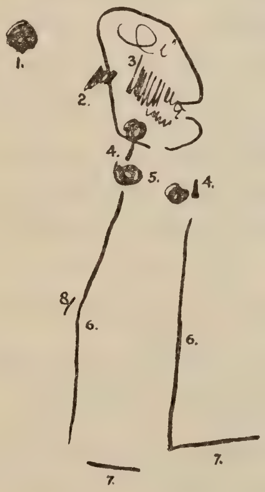


Fig. 100

Fig. 101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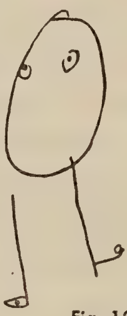

Fig. 102

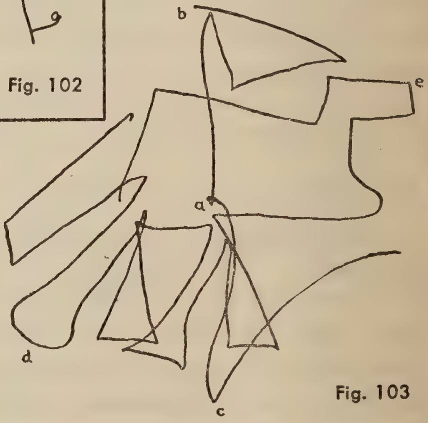

Fig. 103

Figs. 97-103. Expression of the Blind

genius may have a low I.Q. indicates the danger of identifying the richness of personality with the degree of intelligence. The conscious recognition of relationships depends on a knowledge coming from without, while the unconscious recognition of relationships depends on a knowledge coming from within. The drawings of preschool children demonstrate the discrepancy between the recognition of outer and that of inner relationships.

THE GRAPHIC EXPRESSION OF THE BLIND

The recognition of relationships through experiences perceived from without is necessarily very limited in persons born blind. Although they notice some relationships by tactile sensations, their area of perceiving relationships is limited and they have no control in the graphic expression of such relationships. We have not been able to study graphic expressions in preschool children who were born blind, but we have made some studies of drawings of an 11-year-old boy* who since birth has been almost totally blind. Drawing with a colored crayon, the child feels the lines with his finger, saying, "The crayon marks feel rough." When asked to draw "something," he makes a horizontal stroke which ends in an oblique stroke, directed upwards; then he makes a spiral below the horizontal stroke (Fig. 99). The beautiful swing of the spiral is remarkable, as is the fact that one curve does not cross another but runs parallel to it, and that the end of the spiral stops at the curve, closing the spiral in a perfect ellipse. The length of the horizontal stroke is three times the length of the oblique stroke; the diameter of the spiral is double the length of the horizontal stroke. The same child was able to make a simple drawing of a dog (Fig. 100), of which he remarked: "I'll make a long-legged animal." The eyes are outside of the body. The drawing, however, shows proportions, such as equal length of the two legs (cd = ef), and the length of the total animal is double the length of the legs (ab = cd = ef).

The next drawing by this child (Fig. 101) was that of a "man"; but here the child asked for suggestions. He made the head, stopped, and asked what to do next. The observer suggested eyes, nose, and mouth. The child drew one eye outside the head (1); repeated vertical lines, put into the surrounding line of the head, served to indicate mouth (3) and nose (2); two short verticals (4) indicated the neck, and two circular dots the shoulders (the child said they were round) (5); two long vertical lines represented the legs (6) ending in two horizontal lines for the feet (7); he drew a small vertical line parallel to the first leg, saying that these were the knees, which were flat (8). The whole drawing is much less organized than the two preceding ones. The child seems to have especial difficulty in imagining the form of the human body; he probably has had more occasion to experience body forms by touching a dog than by doing so with a human being, and he found his full expression when drawing an abstract form that he imagined himself (Fig. 99). The figure of the "man" is devoid of proportions. The different degrees of proportion in the different drawings seem to depend on the child's feeling into relationships. The emotional participation is highest for abstract forms and lowest for the human body with which the child is less familiar than with the body of a dog, whose total form he was able to experience by touch.

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* Obtained through the courtesy of the Poughkeepsie Day School. The drawings, originally made with crayon, had to be reproduced in ink.

A similar observation was made with drawings by a 19-year-old blind boy.* His drawing of a man (Fig. 102) is similar to drawings by a preschool child and does not show proportions, but a drawing of a rider on a horse, stimulated by an experience, real or imaginary (Fig. 103), shows rhythm and proportions, the seat of the rider (a) being the center of the drawing (ab = ac and ad = ae). Our observation suggests that the sense of proportions which appear graphically is not a factor of visual experience, but seems to be deeply rooted in the organism. This inner sense of proportions seems to depend on emotional factors.

CHANGES IN PERSONALITY AND THE CHANGE OF GRAPHIC PROPORTIONS

THE GRAPHIC EXPRESSION OF THE EPILEPTIC

The hypothesis that the unconscious sensing of relationships and the R.Q. are an expression and an index of emotional factors in the personality would find support if rhythmical proportions underwent changes corresponding to emotional changes in the personality. It is very difficult systematically to observe changes in personality, especially similar changes in a number of persons. One common change of personality, however, happens in persons afflicted by epileptic attacks. The emotional changes before and after the seizure are, for instance, described by Dostoevski, who himself was an epileptic. He, as well as other authors, describes the feeling of an enormous extension of the ego as a psychological characteristic of the seizure; everything appears in greater dimensions, time and space are enlarged. Psychological changes occurring during the seizure can be observed by brain waves. The observed correlation between mental processes and wave patterns and the change of the wave pattern before and after the seizure suggests a change of inner personal dynamics caused by an epileptic attack. In pursuit of our problem of whether graphic proportions and their pattern are affected by inner personal changes, we studied the drawings of a man done by epileptic children before and after seizures. Miss Florentine Hackbush, psychologist with the Bureau of Mental Health in the Commonwealth of Pennsylvania, Department of Welfare, Harrisburg, was kind enough to conduct our experiment. In her letter of June 12, 1944, Miss Hackbush gives a report of her procedure:

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* Obtained through the courtesy of the New York Institute for the Education of the Blind.

> On the date I went to Salinsgrove, April 25, I had all the school children do a drawing of a man. These are not the cases at Salinsgrove, naturally, which have the most frequent attacks, but it was a supervised group in charge of intelligent persons and it seemed advisable to see what could be done with this group. I left the drawing with the teachers, who had seen the Goodenough procedure and learned it, with instructions to watch each child that had seizures, and as soon as he or she got back into the seat to give him a pencil and piece of paper and ask him to draw a man.

From my examination of the two drawings of a man, made by seven children before and after seizure, two cases are selected. The other cases will be discussed elsewhere.* The following are some biographical data:

Case S. A. is diagnosed as a case of idiopathic epilepsy. A great-great uncle, on the maternal side, is said to have had epilepsy; the maternal grandmother died of Bright's disease; the mother and a great-aunt died of tuberculosis; a great grandfather and a second cousin died of diabetes. S. A. is 12 years of age. He is said to have had his first attack at 2 years. The cause of the attack is given as falling on the floor and hitting his head, although there would be a question of cause or result. The second attack occurred within six weeks and lasted three days. Attacks were said to be less frequent but more severe at the time of commitment, and he had become more temperamental, according to the parents. Most attacks begin in the evening and he has an aura. He has had as many as fourteen attacks in one day. His left arm was amputated at the shoulder joint as the result of an accident.

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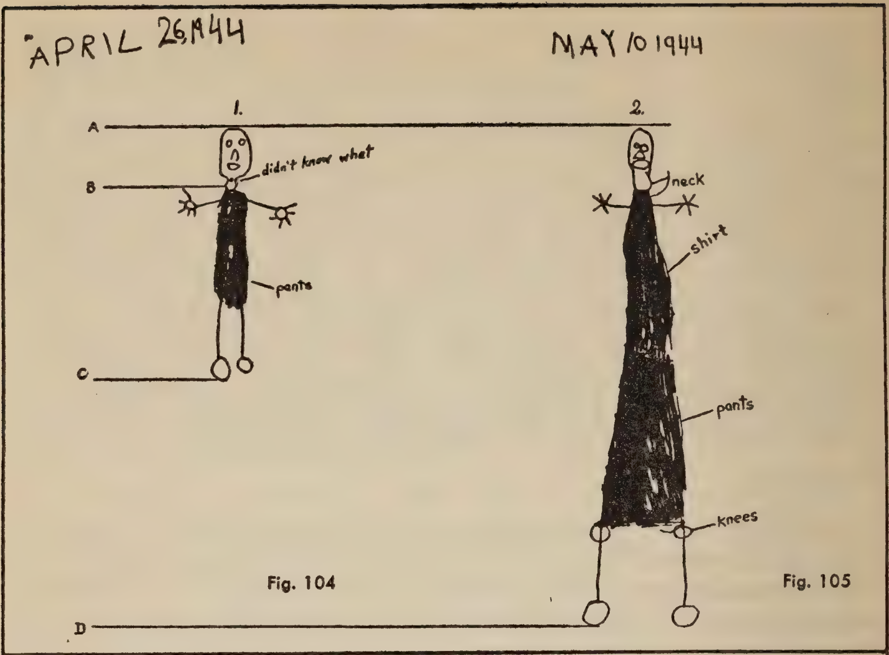
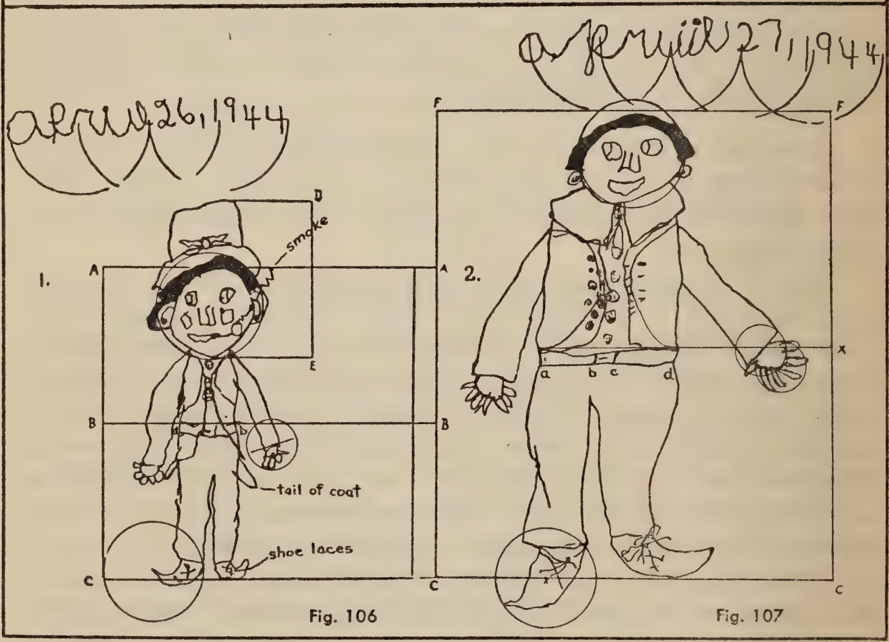
* *Diagram of the Unconscious.*



APRIL 26,1944
MAY 10 1944
1.
2.
A
B
C
D
didn't know what
pants
neck
shirt
pants
knees

Fig. 104

Fig. 105



april 26,1944
april 27,1944
1.
2.
A
B
C
D
E
F
smoke
tail of coat
shoe laces
a b c d
x

Fig. 106

Fig. 107

FIGS. 104-107. CONSISTENCY AND CHANGE OF RHYTHM AFTER AN EPILEPTIC SEIZURE

Case R. T. suffers from petit mal attacks. He is 14 years of age; his mental age is between 6 and 7 years (I.Q. below 50). There is no school achievement.

Simple proportions could be observed in all the cases studied, and it therefore seems that the R.Q. is not considerably affected by the disease. Comparing the size of features in the drawings made before and in those made after the seizure, we made the startling observation that in all but one case the length of features in the drawing made after the seizure increased to double or to one-and-a-half times the length they had in the drawing before the seizure. This finding, confirmed by a great number of observations, to be reported elsewhere,* indicates that the structure of the R.Q. remains rather consistent, but that the rhythmic proportions change according to laws of expansion and reduction.

In the drawing by S. A.† made immediately after the seizure, the length of the head, as well as the length of the arms, remains almost exactly the same as it was before the seizure, while the entire figure is extended to double the former length (Figs. 104, 105).

In the drawing by R. T.† made immediately after the seizure, the size of the head (without the hat) remains the same as it was before the seizure, while the hand on the right side of the picture increases one-and-a-half times, the foot on the left side of the picture increases twofold, and the total figure increases to one-and-a-half times. The other features show either a constancy or an increase in simple proportions (Figs. 106, 107).

Our observations lead us to the following conclusions: Drawings demonstrate relationships of graphic movements; graphic movements are a projection of bodily movements upon paper; the bodily movements depend on inner personal dynamics or inner personal movements, which seem to follow definite patterns of relationships according to the law of the consistent personality. The individual expresses and perceives relationships not only by means of his intelligence, but also by means of inner movements which seem to depend on emotional factors. The individual cannot, therefore, be evaluated only in terms of his conscious sensing of relationships; he must also be evaluated in terms of his unconscious sensing of relationships. This seems to be especially important for the preschool child, whose life pattern is more determined by his unconscious than by his conscious life.

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* Op. cit., in preparation.

† Reproduced directly after the original

THE UNCONSCIOUS SENSING OF RELATIONSHIPS AS A POSSIBLY INNATE FACTOR OF PERSONALITY

Regarding the problem of whether rhythmical organization may be considered to be an innate factor, we studied the graphic movements of a child from 10 months up to 8 years of age. To exclude subjectivity in the selection of such material we again referred to drawings by a child which had already been published without reference to their proportions(173) (Figs. 108-12). Here we are fortunate in having the child's first two strokes, made at the age of 10 months (Fig. 108). We have the surprising result that the child, just able to hold the pencil, and making only two strokes, a shorter and a longer one, already manifests perfect proportions.

1. The short stroke is exactly half the length of the long one.
2. The most astonishing fact is that this simple proportion, 1:2, appears not only in the size but also in the position of these strokes. The distance between the upper ends of both strokes is exactly the same length as that of the shorter stroke.
3. The distance between the lower ends of both strokes is exactly the same length as that of the longer stroke.

Measuring other drawings by the same child, we observe that the length and the same proportions reappear again and again in drawings made at later ages (Figs. 109-11). The present author found the same unit of length (Fig. 112) and its proportions in 35 per cent of about 100 drawings by the same child, made between the ages of 10 months and 8 years.

Our observation suggests that the rhythmic manifestation seems to be largely determined by innate factors.

Our method of measurement indicates that graphic movement can be used as an object for scientific investigation.

Up to now, anyone attempting to diagnose personality from graphic expressions could not refute the objection that graphic forms are conditioned either by imitation, learning, and training, or by chance or external conditions of writing or drawing (material used, environmental factors, etc.). The finding of unconscious proportions, however, indicates that organizing factors are at work which have nothing to do with the artist's observation or learning, and which could not have originated by chance or in accidental conditions of writing and drawing. The fact that the organization of graphic movement appears in the earliest years of an individual's life also refutes the general objection that children's graphic expressions result from a mere play of movement.

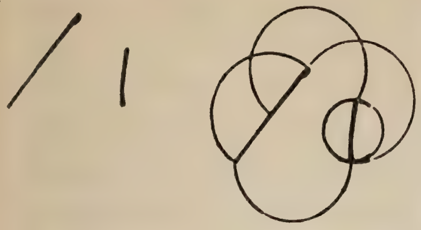

Fig. 108

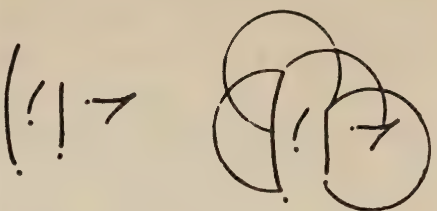

Fig. 109

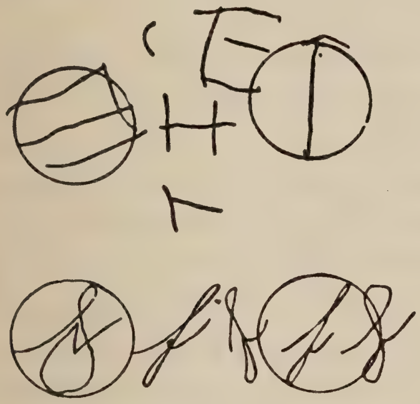

Fig. 110

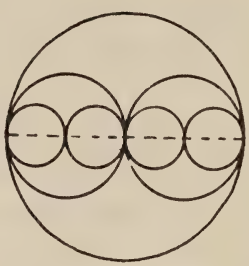

Fig. 112

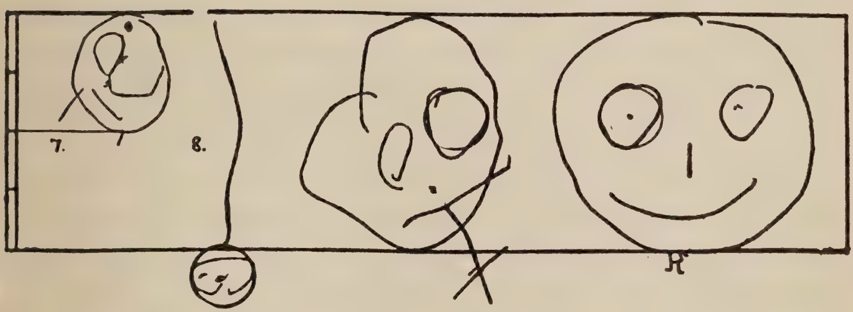

Fig. 111

Figs. 108-112. Consistency of Rhythm from 10 Months to 8 Years of Age

(Reproduced by courtesy of Harcourt, Brace from *The Psychology of Children's Drawings*, by Helga Eng.)

We have frequently mentioned differences in the structure of personality of child and of adult. Such differences seem not to exist concerning the R.Q., the organizing principle of movements. Our investigations, which we shall present in a special study,* indicate that the R.Q. is a factor of personality which changes according to the changes in the personality. Since the R.Q. is not related to learning and training, we may assume that the basic structure of personality, that nucleus which exists independently of experiences, is common in both child and adult, and it may be only the difference of experiences which produces the two worlds.

DYNAMICS OF INTELLIGENCE

How can we now explain the difference between I.Q. and R.Q.? Although we are not yet able to specify which spheres of personality are represented by the R.Q., it appears that the rhythmic proportions are made unconsciously and that they are neither learned nor trained. Intelligence, which largely depends on factors of learning and training, seems to be paralleled by innate potentialities. Conscious and unconscious organization, logical and artistic abilities seem to have these two channels of expression, intelligence and rhythm. If a child's R.Q. is higher than his I.Q., this phenomenon would seem to be due to an incomplete development of the child from the unconscious rhythmical stage to the conscious intellectual stage. If the I.Q. is higher than the R.Q., the intelligence manifested may be due to factors of training, learning, or imitative abilities more than to the development of the total personality, or we may have to do with a precocious development due to the child's ambition to be adult at the expense of an integration of personality. Only in the case where R.Q. as well as I.Q. is highly developed in ratio to the age level can we speak of a highly developed, integrated personality. And only in the case where R.Q. as well as I.Q. is underdeveloped in ratio to the age level can we speak of a subnormal personality organization. A discrepancy between I.Q. and R.Q. indicates an instability of personality which may originate either in an overstraining of intellectual functions (self-consciousness, sophistication) or in a chaos of emotional drives. In the majority of cases I.Q. and R.Q. are interrelated, but it is the degree of interrelation that counts, and that can be estimated only by considering the value of all constituent elements. Supposing that I.Q. and R.Q. can be validated, it would seem that the dynamics of personality may be formulated as the proportion between I.Q. and R.Q.

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* Op. cit., in preparation.

Personality is a unity. Since the child's emotions, his thoughts, his social relationships, and all his activities are structurally different from corresponding manifestations of the adult, we must assume that the child's intelligence also has a different structure, a different frame of reference, and a different value from that of the adult. Intelligence is based upon the functions of accumulating knowledge and of using knowledge in terms of establishing relationships. The child has not the stimulus to accumulate knowledge for the sake of its practical use but only within the frame of his search for his self. Here practical knowledge, imaginings, and fairy tales play the same role. This means that a child may have a low factual knowledge, which would give him a low score in that part of an intelligence test that checks upon his knowledge. The intelligence of the child might, however, rank very high if we were to consider his imaginings.

Memory is not a static function which works with any kind of material; it is a dynamic process, effective with material that interests the child, and ineffective with other material. For instance, telling a child a certain number of digits and asking him to repeat them does not arouse the child's interest and is useless for testing his structural memory.

Concerning the child's ability to recognize relationships, we have to bear in mind that the child's relationships differ from those of the adult. The child sees relationships between things the adult does not see, and vice versa. All the test questions such as "What would you do if a certain thing happened?" demand adult standards which, if the child has them, may even be a negative sign—the sign not of a genuine but of an artificial development. Hence, many of the questions in intelligence tests do not test the structure of the child; rather, they test what the adult expects of an artificial child. What we vaguely call the child's intelligence, namely, his mental response to outside stimuli, is not determined by the objective quality of such stimuli, as is the case with the adult, but by the child's subjective projections upon them. Since these projections are subjective, we cannot find a common denominator for them and therefore cannot evaluate the child's so-called intelligence in an objective way. Hence the child's intelligence, even in a higher degree than that of the adult, is a dynamic and not a static phenomenon; it cannot be separated from its relationship to the child's emotional world and to his environmental situation. While the adult's intelligence is mostly based upon a large series of experiences which condition certain reactions, the child's intelligence is in a *statu nascendi,* a state of development. His intelligence cannot be considered from a fixed level but only as a part of the dynamic process related to the search for his self.

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(Numbers refer to those in the general bibliography.)

Mental tests

27, 50, 99, 183, 233, 256, 272, 274, 281, 286, 288, 346, 370, 390, 402, 408, 413, 440, 471, 472, 530, 531, 546, 560, 599, 602, 605, 617, 619, 623.

Intelligence

52, 73, 74, 107, 136, 144, 148, 205, 224, 225, 391, 408, 413, 431, 471, 476, 506, 523, 559, 561, 570, 576, 599, 605, 606.

Perception and observation

12, 13, 293, 297, 298, 337, 372, 403, 486, 488, 556.

Chapter VIII

PROJECTIVE METHODS FOR JUDGING EXPRESSIVE BEHAVIOR OF PRESCHOOL CHILDREN

DIAGNOSIS OF THE CHILD'S PERSONALITY FROM HIS EVERYDAY BEHAVIOR

TO DIAGNOSE an individual child we must know how the average child behaves in a certain situation. For that purpose child psychology has been especially interested in observing what the general abilities of a child are at certain age levels. The greatest part of literature in child study is devoted to such general behavioral observations. However, the manifestations of certain characteristics depend on environmental factors, on the child's moods, and on the quickness or slowness of his development. If the child shows a very high development at a certain age, we have no indication whether his later development will follow at a corresponding rate; and if he is slow in his development, this slowness may be a temporary phase conditioned by transient biological or environmental factors. This drawback of single observations decreases if we focus upon the total personality of the child. Here observations of his most different behavioral attitudes should be interrelated. Although each behavioral attitude of a child is significant for his personality, it is difficult for the observer to detach certain activities from the uninterrupted behavioral pattern in order to compare one child with another one. The second difficulty is to isolate the observations, i.e., to focus upon certain significant trends of personality. In the following we shall make an approach to both of these problems, namely, to select a group of traits which are important in the characterization of the personality of a single preschool child and to select situations in which the manifestations of these trends can be observed. The following expressions were chosen with regard to preschool children, especially for the years from 3 to 5.

1. Is a child a static or a dynamic type: Does the child prefer to stay in one place or to run around? Is he responsive or unresponsive, rigid or impulsive in his reactions?

2. Has a child a stable or an unstable personality: Has he an even temper or changing moods? Is he persevering in his occupation or does he change it from one instant to the other? Is he consistent or inconsistent in his affections?

3. Is a child active or passive: Is he spontaneous in starting his activities or must he get suggestions? Is he a leader or is he a follower?

4. Is a child adaptive or non-adaptive: Does he show cooperation or is he isolated? Does he show an insight or empathy into the structure of objects or not? Does he show an insight into the exigencies of situations or is he rather blind to them?

5. Does a child show security or insecurity: Has he more courage or fear, self-determination or indecisiveness? Is he free in his movements or inhibited, spontaneous in his attempts or very cautious?

6. Does a child show tension or relaxation: Are his movements strained and rigid or balanced and fluent? Are his activities abrupt or do they form a homogeneous unit? Does he show resistance against or adaptation to given conditions? Does he show aggression and temper tantrums or a balanced behavior?

7. What is a child's attitude toward the sexes: Does a boy prefer boys or girls or does he not show any difference in his attitude toward them? Does a girl prefer girls or boys or does she show any difference in her attitude toward them? Is there a preference for mother or father, female or male teacher? Is the child satisfied with his own sex or would he like to be different?

After this selection of viewpoints for observation we now give a selection of situations in which these reactions can be studied.

1. Children's routine activities, such as dressing and eating: Children who are unable to dress alone show trends of insecurity, and those who are unwilling to accept any help have probably trends toward activity and domination. It is characteristic whether the child while dressing himself makes a postural adjustment to this procedure, for instance, using a bench when putting on his shoes. This shows the child's capacity for insight into given conditions. Slow or hasty eating indicates a child's temper, vitality, or dreami-

ness. Uncleanliness and aggressiveness also may appear in his eating habits.

2. Motor activities, such as jumping, climbing, and running, may indicate security or insecurity in children. When jumping from a board the child may do this hesitatingly, fearfully, asking for help, or he may show initiative and courage. The climbing child may anxiously look for support or climb without concern, looking around freely. The running child may show balance in his movements or awkwardness and an interruption of movement. A child may engage in motor activity of different kinds or he may prefer to rest and relax, thus indicating trends toward activity or passivity. The motor activity may have as its aim the movement itself or it may be conditioned by the desire to be on top, to be higher than other children, to be the first, thus revealing the expression of a desire for dominance.

3. In the child's relationship to objects there appears his feeling into another structure. The way a little girl holds her doll—whether she carries it in her arm or carries it around by the hair—indicates whether the child identifies the object with a human being or not. Boys' preferences for technical games or for imaginative ones, for realistic objects or for something upon which they can project anything are characteristic of the total personality. It is significant whether the child moves toward an object or brings the object toward himself, or whether he asks other people to bring the object to him. This shows activity or passivity, dominance or submission, and there are also children who are dominant by their very passivity in forcing other people to do the work for them.

4. The child's mind may appear in his creative activities. He may prefer realistic or imaginative play. He may prefer to play with given objects or to create. Such creative activities appear in finger painting, brush painting, drawing, clay work, etc.

Finger painting reveals whether the child is the sensual or the tactual type, whether he uses colors for patterning or as an outlet for expansive or aggressive trends.

Brush painting indicates more clearly than finger painting the degree of differentiation in the child's personality.

Clay may be used as a medium for formative qualities or as an outlet for aggression.

Block-building shows the child's relationship to space, and his handling reveals not only security and insecurity but also adaptability.

5. In the child's emotional expression it is not only characteristic what kind of emotion is dominant but also how the child expresses

his emotion. Happiness may be shown by an emphasis of movements, but it may also appear in a restrictive way. Similarly, unhappiness may appear in tantrums or in withdrawal. An absence of overt emotion may be an emotional state turned inward; this may appear as dreaminess or boredom.

Each of these attitudes must be considered in relation to other attitudes. Boredom in an isolated child may appear in a child's remaining alone in one spot. In a communicative child it may appear in teasing and attacking other children.

The foregoing examples might easily be expanded. The observer in a group of children evaluates any activity for comparative studies, but he should always base his comparisons upon the following data:

1. Does a child show a certain kind of behavior in a similar way on different occasions?
2. Is this behavior different from the average behavior of the group?
3. Does the behavior in one activity, for instance eating, correspond to the behavior in another activity, for instance playing?
4. The observer collecting all these data and comparing them should never consider them as isolated items but integrate them into a picture of the whole personality of the child.

EXPRESSIVE BEHAVIOR

The child projects his mental attitude, his drives and emotions, his social trends—in short, his personality—upon his attitudes toward the environment, but these projections also appear in the child's expressive movements themselves. Although even the newborn child reacts to many stimuli coming from without, most of his reactions are to stimuli coming from within his organism. The first environment of the child is his own biological world. When, as we have already discussed (p. 76), the child later develops his own mental world and lives to a great part in this make-believe environment, the second environment of the child is his own mental world. Thus, the young child reacts to inner biological and mental stimuli, which we might call the child's "inner environment," and these reactions appear in his facial expressions, in his postures and movements. If we know the meaning of reactions, their patterns are like hieroglyphics with which we may decipher the inner processes of personality. In other words, expressive movements are reflectors of inner processes which are projected upon them.

Several methods have been developed to "read," or, better, to interpret these projections. We must bear in mind the fact that "accurate" reading, comparable to reading from measuring instruments, is nearly impossible for all manifestations of personality. Even if we knew the "exact" meaning of each hieroglyphic, their combination would furnish a text which could not be translated more accurately than a Chinese text; and we know how many interpretations and variations such texts permit. The best we can expect is to grasp the general meaning. The good translator has rather to use his imagination and ability to identify himself with the situation which he tries to understand than to translate literally sign by sign; he must consider the relationship of images, the background of scenery, the context, in short, the total expression. Of course, the translator must first learn the vocabulary, but its use is a matter of training, of gradual understanding.

After twenty years of studying patterns of expressive movement by a method which the author helped to introduce into modern psychology,(615) he compiled a dictionary of expressive movement signs. Special books would be necessary to deal adequately with each group of signs, such as the bodily reflectors of personality, behavior patterns, graphic movement, color and form as signs of projection, etc. In the following we merely give some hints about the use of the hieroglyphics of expression, conscious of the fact that we only discuss some elementary signs, that we simply give their dictionary value, which becomes useful only in the hands of a good translator. But we are convinced that with a proper training, gained by observing expressions of personality in other people as well as in oneself, everybody may learn to diagnose personality.

The child's first projections are made upon his body; it is with his body that he talks and expresses himself. In order to understand the individual meaning of bodily expression we need a frame of reference, which is given in two ways: (1) the average of bodily activity at a certain age; (2) the desirability of certain activities according to educational standards. There are many available studies on the average of bodily activity at certain age levels. Thus, we have a frame of reference for diagnosis of a child's posture(461, 550) as well as his motor development (53, 415) and his motor skills,(252) and some tests have been developed to measure the degree of the child's motor ability. However, it is not the degree of bodily controls, as such, but their relation to mental characteristics that is important in the study of personality. Bodily balance and motor coordination seem to be related to the child's sense of rhythm, to his ability to express and perceive rhythmical qualities, and also to his constructive abilities.

Expressive movements are closely related to bodily changes during emotions. Everybody knows that inner balance creates a tendency to relax rather than to grow tense, while inner disturbances tend to provoke tenseness. Muscular reactions to satisfaction have been observed in the acts of throwing(232) and writing,(487) indicating that movements increase in a state of satisfaction. The present author observed an increase of graphic movements in a state of elation, a decrease in a state of depression. Inner and outer bodily movements change in emotions such as pain.(122) Thus, inner processes are reflected in bodily movements and partly discharged from inside to outside.

ANALYSIS OF STATIC POSTURES OF THE BODY

Patterns of movement are determined by several factors, which may be classified roughly as "objective" and "subjective" factors. Objective factors influence personality from without; here we have to consider the structure of the object being handled and the environmental conditions under which the act is performed. Let us take handwriting as an example. All persons writing the letter "A" have movement patterns in common, demanded by the structure of this letter. The writing of this letter in a standing or a sitting position and the use of a smooth or a hard pen are environmental conditions modifying the act of writing.

Subjective factors influence personality from within; here we have to distinguish between temporary conditions and enduring qualities of personality. A temporary state of nervousness or excitement will be reflected in a person's movements and thus influence the pattern of his writing. If a person writes the letter "A" under varying environmental conditions, a comparison with the standardized form may show the influence of the different environmental factors. If he writes the same letter in different psychological states of mind, the influence of inner psychological factors will be shown in deviations. If we compare the same letters made under different inner and outer conditions we will find certain characteristics which do not change in all expressions of the same individual but which deviate characteristically from the standardized form; these consistent deviations are considered as reflections of the individual's enduring qualities of personality. Training allows us to distinguish between objective factors (structural and environmental), determining the movement from without, and subjective factors (temporary and enduring qualities of personality), determining the movement from within. The study of expressive movement is mainly concerned with the enduring qualities of personality, subtracting the influence of temporary conditions from the pattern of expressive behavior. Thus, we call only those patterns indicators of personality which seem to be an individual deviation from a standardized or average pattern. The study of expressive behavior from the present author's viewpoint and according to G. W. Allport (14) is "concerned with individual differences in the manner of performing adaptive acts, considered as dependent less upon external and temporary conditions than upon enduring qualities of personality."

In interpreting expressive behavior we must distinguish between static postures and dynamic movements. While movements usually appear in relation to objects from without or stimuli from within, postures more frequently show stereotyped patterns. Bodily postures can best be studied if the body is nude. We observed that a child's posture shows certain characteristics which appear in all his various bodily positions.* The great variety of individual differences may be classified into three main characteristics, which we call the expressions of "indifference," of "balance," and of "tension."

Tension can easily be recognized; the limbs are strained, their position frequently is unsymmetrical, the posture is awkward. The bodily tension reflects a psychological tension which may also appear in nervousness, restlessness, aggression, emotional instability, rigidity, inhibitions, etc.

The expression of balance is the opposite of the expression of tension. The limbs are relaxed, and their position is symmetrical or balanced gracefully. The bodily balance reflects a psychological balance which is characterized by adaptability, a feeling for rhythm, calmness, free behavior, stability.

Indifference is characterized by a lack of concern about the bodily posture; there is neither unconscious balance nor the self-conscious expression of tension. The bodily posture of indifference may indicate an indifference to the environment, shyness in social relationships, a submissive attitude and discouragement. A few individuals belong to one extreme type, but most individuals show degrees of each type in a mixture. The relationship of bodily and psychological features which is characteristic of personality, is exemplified in the following three cases.†

* Our studies were based upon photographs taken during a routine medical examination in Sarah Lawrence College; see 614.

† Photographs reproduced in 614.

CALVIN

He shows in all positions of the body disinterestedness in his own body, lack of self-control, and indifference to his environment. The child seems to be submissive, shy in his social relationships, probably discouraged by his environment.

CAMILLE

She shows in all positions of the body a high degree of balance and rhythm; that is to say, tension and relaxation both are present and in a harmonious relationship. Symmetry of bodily expression is to be found in all attitudes, and relation to the ground also shows this harmony between tension and relaxation. The child seems to have a well-balanced personality. These pictures suggest that the child is sensitive, rhythmical (perhaps musical), internally stable, not dependent on environment; mild, not aggressive, dreamy, and without fear.

JOYCE

She shows, more or less in all attitudes, an emphasis on tension. Symmetry is not always pronounced. Bodily expression is not well balanced. The discrepancy between a high degree of tension and a certain security in relation to the ground (firm stance) indicates that her tension does not depend so much on difficulties in relation to the actual environment as on internal strains. This child seems to be individualistic and affected, compensating for insecurity with a demonstrative behavior.

ANALYSIS OF BODILY MOVEMENTS

The expression in static postures may be compared with the expression in dynamic bodily movements, that is, movements related to a certain activity.

When observing children's behavior in different activities, we see that their reactions to the same task are very different and are accompanied by a different behavior, as shown in their handling of the object, in their facial expressions, in their postures, and in their gestures. There are no two persons who handle the same task in the same way. However, partial similarities allow the grouping of individuals into certain types, depending upon their reactions. It is possible to make many different groupings according to various viewpoints, and in the following we present some examples of such a grouping. The choice of certain types seems to be valid if the same type of reaction appears in the same person on different occasions. Studies made by the author permitted the demonstration of a consistency of expression in different types. We had at our disposal moving pictures which had been taken by Dr. L. J. Stone when children were engaged in the same activity.*

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* Reported in 614, pp. 309-30.

THE CHILD'S APPROACH TO AN OBJECT

One of the moving pictures was taken when children were playing with a balloon. For our following example we selected three pictures, showing the child before punching the balloon (1), when starting his action (2), and after the action (3). Focusing upon the expressive behavior, we could first compare the child's attitude to the task in general. We could compare the dynamics of behavior while the given object was handled. Since the top of the balloon was fixed, we could focus upon the degree of intensity in pushing. Indifference, impetuosity, inhibition, concentration, and attentiveness could be distinguished. The picture showed whether the movements were abrupt or fluent, expansive or restricted, aggressive or mild, strong or weak, rhythmical or arhythmical, whether the child showed secure, insecure, curious, or annoyed behavior.

If, for example, a child's bodily movements in approaching an object show hesitation or withdrawal—closing the eyes, placing the hands behind the back, etc.—the child's personality may be described as passive, cautious, timid, inhibited, etc. Inner tensions find their outlet in violent movements. But the child's bodily movements may show an adequate approach to the object, the movements may be secure and balanced, indicating security and adjustment.

In our study three different attitudes were especially significant. One type was characterized by a predominance of intellectual activity. Such a child was more observant than active, more stimulated by intellectual constructions than by emotional spontaneity. Another type was characterized by emotional activity. He was immediately attracted by the object, more stimulated by spontaneous reaction than by meditation. The third type was that of an inhibited activity. Here the child seemed to be frightened of the object or of his task. He showed neither an interest by observation nor an emotional interest by action, but the attitude was restricted or automatic or monotonous.

For a general classification the observer may note three degrees of response in a child's approach to an object: a high degree (+), a low degree (—), and an adequate response (a); he may distinguish between the degree of expressiveness (E) and of impressionability (I). In the case of punching the balloon a high degree of expressiveness may appear as aggression, a low degree of expressiveness as fear, an adequate response as emotional balance. A high degree of impressionability indicates that the object is not merely considered as a means to discharge energies, but is given a value of its own, thus suggesting interest; a low degree of response suggests indifference. From the relationships mentioned above (+E, —E, aE, +I, —I, aI) various personality features may be deduced.

THE CHILD'S HANDLING OF MATERIAL

In the case of punching the balloon the relationship between child and object is limited, so that the observer is able to focus his attention exclusively upon the factors of expressiveness and impressionability. If the object may be handled in various ways new factors enter into consideration, namely, the child's handling of material and his relationship to his environment.

Another moving picture was taken of children in the so-called "cold cream experiment." * The children received a jar of cold cream, and they were told: "You can do whatever you want with this." The children had never played with this material before. Indicative of the child's personality were his movements when approaching the jar of cold cream, while handling the content of the jar, and when he had finished with the jar. Here again we could compare the child's relationship to the task in general, and again we focused upon the predominance of intellectual, emotional, or inhibited activity.

Next, we could again study the dynamics while the child was handling the object: We could observe whether the child was more interested in the jar itself or in its content and whether the content, the cream, was used in relation to the child's body or in transferring it to objects outside. It was observed whether the child reacted with indifference, cautiously, with interest, with enthusiasm, or carelessly. Persistence in handling the object, aggressiveness in throwing the cream around, creative fantasy in its application, and many other traits seemed to appear in the child's reactions. We give some examples:

One little girl † touches the cold cream cautiously, timidly puts some cream on the tip of her finger, and looks at the cream in awe and amazement. This child's behavior seems to indicate that she is passive, hesitant, timid, and apparently lacks the capacity of creative imagination.

A little boy fearlessly dips his right hand deep into the jar. He critically studies the exterior of the jar and explores to find what he could do with it or its content. He discovers a stick and brings it in relation to the jar; he puts the jar upon the stick. His interest

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* This experiment was devised by L. B. Murphy; see 353.

† See pictures in 614, pp. 314-17

in objects extends to the object in relationship to other things. The child's expressive movements indicate activity, courage, an exploratory spirit, imagination, and a sense of relationships.

FINGER PAINTINGS

A projection of expressive movements upon paper appears in a child's finger paintings, brush paintings, and drawings; the movements, transferred to the paper, give us a "diagram" of the child's movement pattern. The act of finger painting reveals the child's characteristic movement patterns.* We see large sweeping movements, moderate, limited, or hesitant ones. We observe the child's attitude toward a new situation in handling the color cautiously, aggressively, or as if with premeditation. The child's handling of the object appears in his respect for the limits of paper and table, in carelessness, or in his deliberate attempt to go over boundaries. The finger paint evokes an emotional, visual, or tactual response from the child. Some children enjoy the messiness, some anxiously withdraw from it; some children observe the color, some apply it to their own bodies, some "bathe" in color. Whether the child uses colors separately or mixes them, his handling of color to create a design or as a meaningless material, gives indications of personality patterns.

When a child carefully observed the effect which was evoked by the color in his finger paintings, we noticed an "intellectual" attitude. In such a case the lines were regular, one put after the other, and the paper was carefully patterned with symmetrical figures or ornaments. An "emotional" attitude was characterized by pushing the fingers, covered with color, forward on the paper, resulting in impetuous lines and uncoordinated strokes. The "inhibited" child was hesitant about using the color at all; he hesitated to cover the whole paper, and he neither observed the effect of patterning nor was he emotionally stimulated to spontaneous movements. The child's rhythm appears in the pattern of lines, in the expanse of movements, in the degree the sheets are covered with color; the choice of colors may also give some diagnostic hint. Bright colors often appear to be a reflection of liveliness and gaiety, while dark colors seem to correspond to sensations which a child may have during the night and while dreaming.

The graphic reflection of expressive movements, being a translation into another medium of expression, offers an especially valuable tool for analyzing the child's personality. However, the technique of interpretation demands a special training, as we shall discuss in the following.

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* Cf. the Vassar College movie: *Finger Painting.*[548]

THE "BLIND" ANALYSIS OF GRAPHIC EXPRESSION

The significance of proportions, which can be determined by the author's method of measurement, illuminates only one element in children's drawings. The expressive value in drawings cannot be stated as objectively as the value of proportions. With the aim of formulating some objective criteria for interpreting graphic expression in children's drawings, the author made himself familiar with different types of expressiveness in graphic movements of young children; he has developed several methods to explore the expressive value of drawings. After a preliminary classification of types of graphic expression, the specimens were divided into two groups. The author then got photographs of the children belonging to each group, photographs of ordinary play situations and of the nude body, taken during a medical examination, in different positions. Not knowing which graphic specimen belonged to which child, the author tried to match the photographs and the graphic specimens in each group. This matching was 100 per cent successful in some groups; in others it did not succeed at all. In the successful cases the author searched both kinds of expression for the common denominator which made the correct matching possible, assigning a specific meaning to each of the specific characteristics of graphic expression. The unsuccessful cases were equally important, for, by analyzing the mistakes, training in the understanding of the language of graphic expression was acquired. The comparison between graphic expression and body postures was correlated with a comparison between graphic movement and bodily actions and movements as studied in movies of the children.

After a study of the expressive movement of bodily activity and the expressive movement as it appeared in graphic lines, and the expressive value of forms in body postures as well as in graphic forms, similar traces were seen in these different forms of expression, but it was still very doubtful whether it would be possible to make a personality diagnosis from these primitive manifestations in graphic expression.

Next, the author tried to give a "blind" analysis from the scribblings and drawings of these children, that is, without having had any contact with the children, or consulting other forms of their expressive behavior, such as photographs or movies, or obtaining any other information except the age and sex of each child. The blind analysis was compared with associations which the children themselves gave for the object of their scribblings, and with the observations and opinions which the guidance workers gave on each child.

The author himself was very surprised that the blind analysis coincided in most cases with the records and observations made by the workers for the individual children. It is difficult to give statistical information about the degree of congruence and deviation between the author's blind analysis and the guidance worker's observations, because although in several cases the blind analysis referred to environmental conditions of the child which could easily be checked, in other cases it gave a personality picture which coincided with the worker's records in the main but not on specific points, and again in other cases reference was made to traits which had not been actually observed by the worker but which became manifest some time later, so that the blind analysis became effective as prognosis. In one analysis it was stated that the child showed a dangerous introversion leading to a complete withdrawal from social activities, based on an obsession with fantasies that was revealed in his drawings. At the time of the analysis the child had a leading position in the group, and the diagnosis seemed not to correspond to his actual behavior. Two months later the child withdrew completely from all outer activities, became obsessed with his fantasies, which he continually tried to realize in drawings, and he developed grave emotional disturbances, which the blind analysis had indicated before they became manifest.

On the basis of these observations, a classification of the most indicative traces in graphic expression was attempted, thus developing a rough scheme for personality diagnosis from graphic expression. This scheme and some methodological problems will be discussed in the following pages.

GRAPHIC MOVEMENTS A REFLEX OF BODILY MOVEMENTS

If we see a person thrusting his arm forward, and if we ask an observer to describe this movement and its possible meaning, we will probably be told that this movement leads away from the person and its significance might be expanding or aggressive.

If we see a person with his arm inclined toward his own body and ask an observer to describe this movement and its possible meaning, we will probably hear that this movement leads toward the person, possibly meaning reserve, withdrawal, or protection.

Let us imagine putting a pencil into the hand of the moving person, so that these movements are made over a blank paper; the result in the first case will be a stroke directed away from the person and in the second case a stroke directed toward the person.

Thus, such lines seem to correspond to certain attitudes, and the attitudes to certain psychic conditions, so that we may say that each graphic stroke reflects a certain psychic condition. Such movements are spontaneous, like reflexes. They do not have to be learned. They are not only valid for persons of a certain cultural level or of a certain age; any person, in attacking another, will necessarily execute pushing movements, and any person in sudden bodily danger will execute movements of protection. From the fact that a person exerts a strong pressure upon an object we conclude that he has a vigorous impulse, while a person exerting a slight pressure makes us conclude that he has a weak impulse. In the same way, the pressure of a graphic stroke may lead to similar conclusions.

If one person goes directly to an object, and another person stops several times on his way or deviates in different directions, we consider the first person decisive and the second person indecisive. If we make a graphic stroke quickly this stroke will not show any interruption, but if we make such a stroke very slowly we will get a somewhat wavy line, or if we stop during the process the pauses will appear graphically. Thus a graphic stroke may indicate quickness or slowness. If we compare the movements made with hands and arms by a dancer and by a peasant we will get a unanimous agreement that the movements of the dancer show a greater rhythm and swing. It will be said that the movements of the dancer are more artistic, that they have more musical swing, while those of the peasant are clumsy. If we have persons draw curves on paper we will immediately distinguish between those who have a higher swing and those who have a lower swing, and we might conclude a higher or lower degree of rhythm. A person who is always stimulated to expansion will also expand himself on paper, covering it with letters or lines, and a reserved person will limit his expressive movements in attitudes as well as on paper. If a person has difficulty in moving his body freely, we feel that he is inhibited; reflecting such movements in a graphic form on paper, his lines will be unbalanced. With free movements, on the contrary, well-balanced lines will result.

These examples are intended to show how graphic movements reflect bodily movements, and how bodily movements are influenced by personality. Since these basic movements have the character of reflex mechanism, we may expect to find them and their graphic replicas in all persons at all ages, including children who have never learned to draw or to write.

Bodily movements can be reinforced by actions, of which certain basic ones also are common to all people. A person, in protecting himself, holds his arm before his body so that an attack directed against his body may be stopped by the arm, which forms a barrier. If this person reinforces such protection he will surround himself with a barricade, with an enclosure. We also find a representation of such principles in graphic movements; for instance, a word becomes enforced if it is underlined. These principles, too, do not seem to be learned, but seem to be spontaneous reactions. Graphic movements are partly controlled optically and are partly formed intentionally, but the basic element seems to be an immediate expression of inner trends. This becomes especially evident in children's expressions of proportions, which appear as early as the first years of life and even in blind persons (see pp. 184, 191).

GRAPHIC MOVEMENTS A REFLEX OF INNER PERSONAL DYNAMICS

If we consider graphic movements as a projection of bodily movements, believing that the latter are in relation to personality trends, and if we suppose that they appear as an immediate expression of personality, we may expect them from the moment a child can handle a pencil, which usually begins at the age of between 1 and 2 years. From that time on, bodily movements, transferred to graphic movement, will reveal personality. Even the child who has not yet fully coordinated movements will, nevertheless, move his hand with more or less force, resulting in different degrees of pressure of strokes upon the paper. His movements will be quick or slow, resulting in straight or interrupted lines. The movements may persevere on one spot or show a rhythmical progression. There may occur sudden unregulated movements, appearing as lines which, in an uncoordinated way, go in different directions. We may find narrow angular curves or broad circular swings. Broad movements aim at covering much of the paper in an expanding tendency, while in using narrow movements, the person is generally restricting himself.

All these different graphic movements may be distinguished even in the earliest stage of graphic expression. They reveal personality trends even at a time when these movements are not yet coordinated, where no shape or form appears. On that level we find as the most decisive factors: pressure, tempo, mobility, regularity, and differentiation. The expressive value of these features will become more comprehensible if we reduce them to bodily movements.

Persons who exert a strong pressure with their hand show force, while those who produce a low pressure manifest a certain weakness. Thus we may interpret:

high pressure—force, vitality
low pressure—weakness

A person who moves straight toward a goal is quick and decisive. The person whose movement is often interrupted takes a longer time than he would if he were moving straight forward, and since such interruptions refer to an interruption of a forward-pushing decision, we infer a factor of undecisiveness:

straight lines—quick, decisive
interrupted lines—slow, undecisive

If a person confines his movements to a single spot, there must be factors which hamper him from going forward. If a person makes rhythmical movements, like the swing of a pendulum, these movements are balanced:

confinement—inhibition
rhythmical progression—balance

If a person makes sudden irregular movements he is pushed by impulses; if all movements are of a monotonous similarity there seems to be an absence of impulse, a lack of differentiation:

sudden movements—impulsiveness
monotonous movements—passivity, lack of differentiation

If a child moves in different directions, he is pushed by various uncoordinated impulses. Circular movements appear as an expression of rhythm and swing:

lines in different directions—uncoordinated impulses
circular curves—rhythm, swing

A person moving very hesitantly makes small and narrow movements, indicating restriction, while a person with big and broad movements indicates his tendency to expand himself:

big and broad movements—expansion
narrow movements—restriction

THE INTERRELATIONSHIP OF GRAPHIC MOVEMENTS

The most important point for an interpretation is the understanding of the relationships of features. In all studies of expression, the most important rule is that one element acquires significance only in relation to the whole. Therefore the elementary meaning is like a letter whose significance is derived from its combination with other letters in forming a word.

For instance, if we find low pressure and circular curves together, the significance of low pressure as weakness is so modified by the rhythmic element of the rounded curves that this kind of weakness may be considered as sensitivity.

If low pressure is accompanied by sudden movements or lines in different directions, we have not a passive weakness but rather an emotional one which might be described as nervous irritability.

A combination of low pressure with interrupted lines or confinement to a spot or monotonous movements indicates a high degree of weakness which might range from passivity and inhibition to an emotional disturbance.

High pressure in connection with rhythmical forms hints at creative capacity.

High pressure accompanied by movements without rhythm and balance might hint at aggressiveness.

High pressure combined with confinement to a spot indicates a stopping of energies, and hence a tension in personality.

High pressure combined with lines going in different directions, with interruption, or with sudden areas of low pressure, might hint at a manic-depressive organization.

Broad movements connected with high pressure may hint at an active personality.

If broad movements are accompanied by sudden movements and straight lines there may appear a tendency toward domination.

If broad movements are related to lines in different directions such expansive movements, involving an element of turmoil, hint at a tendency to antagonize one's own environment.

Broad movements combined with interrupted lines or confinement indicate that the expansive movement is stopped, and this lack of fluidity and relationship leads us to believe that the child is not very approachable.

Narrow movements connected with low pressure seem to indicate discouragement.

A combination of narrow movements with interrupted lines or confinement may indicate fear and anxiety.

Narrow movements combined with circular curves seem to indicate a certain withdrawing from the environment, suggesting dreaminess and self-involvement.

Narrow movements accompanied by lines in different directions or sudden movements hint at a state of excitation and nervousness.

In a combination of narrow movements with low pressure and interrupted lines, or confinement or monotony, we approach an emotional disturbance.

Experience indicates that graphic movements, even of the most primitive kind, are not merely accidental. Each movement results from an inner personal process which is determined by personality, but at different times different parts of the personality may be in the foreground of activity. Each person, even the quietest, is at times aggressive. If we get a graphic specimen made in such an aggressive mood, which is very rare for that person, we would point out a personality trait which is not at all typical of this person. If we wish to get the typical features of personality, prevailing over longer periods, we must compare graphic specimens of the same person made at different times. Only such comparisons will indicate the significant features which serve as a starting point for explaining what we call personality, namely, a rather consistent configuration of trends. Such comparison gives us, even for the most primitive kind of drawing, new elements of consideration.

We can see, for instance, whether a child repeats the same graphic traits at different times. Such repetition not only indicates that these movements pertain to the basic personality, but since a basic trend can also be expressed in a variety of movements, very similar repetitions express a high degree of the trend concerned. If, for example, such repetition occurs in circular curves we may guess that the child has not only a capacity for rhythmic expression, but that he possesses the rhythmic expression as a talent, hinting at a basis for developing an artistic personality. If, on the other hand, interruptions or confinements appear repeatedly we may deduce that the inhibitions are not transient ones, but indicate a more serious disturbance, either of a biological or of a psychological nature. Certain strokes which in one specimen might indicate a temporary insecurity are, if repeated in the same way, significant as an indication of an emotional disturbance. In such a case the lines may be considered as curves on a seismograph which indicate a nervous or even neurotic activity.

STRUCTURE OF FORMS AND LINES

The value of repetitions becomes a still more indicative factor if related to forms.

The problem of forms opens some new aspects. In the very first graphic representations of children we seldom find that lines are coordinated in forms. However, there are exceptions, and if we find such forms at a very early age we may consider it a sign of high development. The value of distinct forms depends on two factors: the age level at which such forms appear, and the structure of the form itself, whether it consists of simple or of complicated lines. On a higher age level, the lack of any form principle is a negative factor. As movements are developed from the first uncoordinated movement of the infant to a determination by actions, graphic movements are developed to a determination by forms. A child who, at the proper age, shows an absence of form principles, possesses a lack of observation or of expressiveness. Such lack is due either to inner psychic or to environmental factors, an origin that may be decided by investigating the child's associations with these forms. Vague forms hint at an educational problem, since a missing pattern of personality makes it difficult to find a starting point for educational influence.

With the development of forms appears the question of their distribution and proportion. A good distribution at an early age hints at creative ability (Fig. 2). A poor distribution on a later age level indicates a certain rhythmical disturbance which may be caused by a disturbed relation between child and environment, or by an unharmonious factor in the personality of the child (Fig. 7). The differentiation of forms from each other indicates that the child recognizes the limits of objects and environment. We may take it as the sign of an ability to adjust himself. If forms cross each other unintentionally, we may find the opposite of the previous case, and in very grave instances it may point to a lack of orderliness and cleanliness. The proportion of forms also allows us to draw certain conclusions. If children prefer very big forms they usually manifest a tendency toward expansion up to domination. If children make very small forms it may be due to discouragement. A contrast of very small and very large forms mostly seems to be the expression of a conflict. The child's associations with the meaning of these forms may reveal this conflict. The small form may represent the child himself and the bigger one a member of the family to whom the child feels inferior.

The structure of the form itself may reveal both the way in which the child relates and unifies different impressions or expressions and the degree of the child's development, since the development takes place in proportion to such a unifying principle. The unifying principle is developed from the state of "relation" to that of "integration." This is expressed graphically in the first stage when the child connects different forms by lines in the manner of pictographs (as we know them from some Indian tribes). In the second stage different smaller form elements are embraced by larger ones, in an ornamental way, indicating the principle of hierarchic order and of integration.

While simple lines are more a reflex of the child's impulses, forms are an externalization of the child's concepts of his environment. In the handling of forms the child manifests his attitude toward an object or a person, thus allowing us to draw conclusions about his behavior. Generally speaking, a clear patterning of forms suggests a free approach of the child to the object; a vague, insecure, hampered shape hints at inhibitions up to fears.

Emphasis on details or exactness may indicate an ability in observing reality (Fig. 8), while fanciful forms suggest the predominance of a private world with dreams and fantasies (Fig. 55).

A form principle which has a specific importance in the drawings of young children is that of a surrounding line (see p. 147). Surrounding lines may represent the concept of differentiation, corresponding to the beginning limitation of the child's own individuality from that of others. The child thus establishes his own sphere of action and expression, his own standard, his own rules. The expression of a private world may in extreme cases take the form of neurotic schematism. A surrounding line may also represent a protection. The child may feel insecure and try to protect his self-representation or the objects, with which he identifies himself. Finally, a surrounding line may stand for the concept of isolation. Only by further investigation can we discover the psychological value of the pattern. If we have, for instance, narrow movements, or weak pressure, we may deduce that the surrounding line does not represent the beginning of differentiation of the child's own personality, but rather the passive feeling of isolation and being hampered. If we have broad movements and high pressure, the surrounding line may express the child's tendency to build up his own field of action. A surrounding line of a big size may also express the child's tendency toward possession and expansion. All children try to expand themselves, some in activity, others in aggression, and others in mere running around. But besides the expansion in the sphere of motion, there exists an expansion in the sphere of fantasy and dreams. These children may sit on one spot and dream of the large world around them. Thus, a surrounding line may be expressive in many ways, and the various possible interpretations will show how difficult it is to interpret one single element without its relationship to other elements; it is always the whole which determines the value of the part.

The Texture of Strokes

The comparison of drawings performed by the same child at different times also permits us to compare the texture and direction of the strokes. The texture of a stroke may depend on the kind of paper and pencil used, and on the kind of support given while drawing; but if the same texture appears on different occasions we may use it as material for interpretation.

Some children always make faint, wobbling lines and shadings which are blurred and fuzzy. Such children are usually very vague in their behavior and in their wishes; on the other hand, they may be very obedient, passive to the point of masochism.

The preference for shadings suggests a tactile sensitivity, often a preference for soft material, a desire to caress dogs, cats, etc.*

The preference for spotting and the tendency to cover the white plane as thoroughly as possible with strokes is often an expression of what Freud calls the "anal stage" (Fig. 59).

Jittery lines indicate an irritation, sometimes related to the object or person the child is drawing.

Interruption may point to stubbornness, negativism, or sullenness.

There are children who make oversharp lines; they almost cut the paper with the point of the pencil. They usually like contrasts of black and white and prefer to distinguish objects or persons, if they draw such, by special features (big eyes, ears, etc.). Such children usually know what they want; they have definite likes and dislikes, wishes, reactions. They may be rebellious, active, dominating, aggressive to the point of sadism (Fig. 53).

Marking with little lines (Fig. 54) and persevering at small ornamental elements are the preference of children who are lost in a state of dreaminess (Fig. 55); they are attracted more by the texture itself than by the object they wish to represent.

Conversely, big lines made impulsively are the preference of children who like movement and action (Fig. 40). They may be more attracted by the movement itself than by the representation of the object; they neglect the texture and are satisfied to give only the rough contour.

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* Cp. similar interpretation in the Rorschach test.

DIRECTION OF STROKES

The direction of strokes has a special significance. If we consider the outline of a figure, or the strokes connecting different figures, we can distinguish whether the direction of such strokes is made in a secure or in an insecure way. The movement may aim at a certain point in a direct way, and be made with swing and impulse. We may conclude that children who so express themselves are determined, know what they want, have a stable disposition, and manifest a feeling of security.

With another group the strokes are not made impulsively; they show interruptions and perhaps confinement. We may conclude that such children act less on impulse than on careful consideration. They usually premeditate, and the intellect plays a more important role than impulses or feelings. But the direction of strokes may also appear vague and insecure, and show interruption. There may be a lack of organization, pointing to a lower development of personality or to a neurotic disposition. The lines may be confused, the margin of strokes wobbly; here we would suppose a confused and unshaped personality.

The direction of strokes may proceed in a more angular or a more rounded and circular way. The angular way is a reflex of movements which come from different directions, representing two different dynamics and usually indicating a conflict. The degree of the angle seems to be nearly in proportion to the degree of tension resulting from a conflict. The smaller and more pointed the angle appears, the higher is the tension. The expression of tension is augmented by the degree of pressure. The characteristic sign of the angle is the break of one movement at its juncture with another movement. The emotional conflict thus resulting has its parallel in a characteristic mental attitude of confronting one idea with another one. We call this phenomenon reflection, and it may appear in different forms: as counterbalancing, criticism, hypercriticism, doubt, self-consciousness, self-observation, restraint, etc.

In the circular movement, different directions are leveled in one continuous flow. Here also the degree of the curve is nearly in proportion to the degree of balance and rhythmic activity. The more regular the curve appears, the higher is the capacity for bringing different tendencies into relation in one balanced expression, and we may deduce in such a case musical, artistic, and creative capacities (compare Fig. 5 with Fig. 7). Here also the degree of pressure modifies the interpretation of the direction of movement. If the pressure is strong and the stroke is sharp, the rhythmical principle is made distinctly visible, and we may deduce that the child will express himself realistically. If the pressure is weak and the stroke faint, the rhythmical principle becomes apparent only in vague forms and we may deduce that the child expresses himself more in dreams and fantasies.

The characteristic sign of the curve is the fluency of its movement. The emotional balance has its parallel in a characteristic mental attitude, that is, a preference for fluent moods instead of an intellectual, analytic attitude (Fig. 87).

As we shall discuss later in another connection, graphic movements of a narrow angular or broad circular kind seem to be related to typological characteristics of bodily movements. Movements with broad curves are more a peculiarity of the so-called cycloid body type, whose forms, in general, are also broad. The cycloid type is more attached to the outer form of objects; angular movements are more a peculiarity of the so-called schizoid type, who is more attached to the significance of objects.

The preference for horizontal or for vertical movements is also revealing to a certain degree. The horizontal position is that of rest (Fig. 57), the vertical that of movement (Fig. 56). If we are in a horizontal position, we are resting; in a vertical position we are standing or walking. A preference for vertical strokes seems to be characteristic of children who prefer to be in motion, to run around, while a preference for horizontal strokes is shown by children who like to rest or to stay in one place. Here too the significance is qualified by the kind of pressure applied. Horizontal lines with a strong pressure indicate the element of confinement; the child seems to be determined to stay in one place, and here we may deduce the factor of stubbornness and resistance. Horizontal lines with low pressure indicate weakness, and we may deduce that the child prefers the resting position because of physical weakness or psychic insecurity. Vertical lines with a strong pressure emphasize active determination. The child seems to be determined to carry through what he wants. Vertical lines with a low pressure relate the factor of sensitivity to that of motion, and we might expect a nervous activity.

Structurally it seems that girls have a slight preference for rest and boys for mobility. Thus, with limitations, we may connect a feminine trend with the horizontal and a masculine trend with the vertical, but this relation seems to be fruitful in only one way. If we see a preference for horizontals with low pressure in boys, this suggests a feminine note; if we see a preference for verticals with high pressure in girls, this suggests a masculine note.

The direction of lines may appear in five ways:

1. A vertical may go from top to bottom.
2. A vertical may go from bottom to top.
3. A horizontal may go from left to right.
4. A horizontal may go from right to left.
5. All directions may be combined in a surrounding movement.

The significance of all these directions becomes apparent if we reduce them to bodily activity. When the child is sitting in front of the paper, the bottom of the paper is nearest to his body. The movement from top to bottom corresponds to the movement of pulling distant objects toward one's own body. This is especially exemplified by young children, as they not only pull objects toward their own bodies, but put them into their mouths, thus embodying them. The opposite movement, from bottom to top, corresponds to the movement of reaching outward. Thus, the significance of the movement from top to bottom corresponds more to introversion, and that of the movement from bottom to top to extraversion.

The significance of horizontal movements, from left to right and from right to left, is similar. When the child is sitting before the paper, drawing with his right hand, his body is to the left of his drawing hand and the objects of his environment are to the right of his hand. Bringing a thing to his body with his right hand, the child makes a movement from right to left; turning the right hand away from the body, it goes from left to right. Thus the significance of the movement from right to left corresponds more to that of introversion, and that from left to right more to extraversion.

Let us remark here that introversion-extraversion has nothing to do with activity-passivity, although the concepts are sometimes confounded. Introversion means that stimuli are taken from the inner personality, from one's own ideas, and that in general the interest is focused on one's personality. Extraversion means that stimuli are taken from the outer environment, and that in general the interest is focused on the environment. Both types can act actively or passively. With mental cases in a psychotic state of introversion we sometimes observe extreme activity, while there are extravert persons who are extremely phlegmatic and passive. Similarly, we must also distinguish between motion and activity, phlegm and passivity, which terms must not be confused.

The degree of introvert-extravert activity represented by the direction of strokes is indicated by the *pressure* of strokes. A stroke from bottom to top, combined with a high pressure, points toward aggression and domination; such a stroke, if combined with low pressure, points more toward interest in environment, curiosity, etc. A stroke from top to bottom, combined with a high pressure, points toward anxieties, masochism; such a stroke, if combined with low pressure, seems to indicate self-involvement, dreaminess.

A stroke from left to right, combined with a high pressure, points to tendencies toward leadership; such a stroke, if combined with a low pressure, seems to be more significant of a seeking for support. A stroke from right to left, combined with high pressure, emphasizes self-determination; if combined with low pressure, isolation and discouragement.

If we have a circular movement, the different tendencies appear confounded and we have, in general, the indication of a harmonious and rhythmical personality. But if the circular movement is performed with insecure and shapeless strokes, we get the impression of an evasion of any direction and decision.

As we mentioned before, the definite significance of all these characteristics results only from their combination with other strokes and from their conformation. In general we do not find only verticals, or only horizontals, or only lines from top to bottom and vice versa, or from left to right and vice versa. Only the degree of emphasis on the line concerned and its direction is decisive.

MOVEMENT AND FORM

As to the question whether graphic expression may reveal certain spheres or problems of personality in a higher degree than other channels of expression, the author believes that one factor becomes especially evident: the degree of adjustment of personality, namely, the way an individual adjusts his drives to the demands of the environment. These stimuli, such as aggression, inhibition, fantasies, become manifest in movements: pushing movements (aggressive), stopped movements (inhibition), flowing movements (fantasies), etc., and they are reflected in the structure of graphic strokes. Out of these movements of the inner reality, certain forms are made to stand for persons or objects of the outer reality. The relation between movement and form indicates whether the inner reality is adapted to the outer world, whether the inner reality is more dominant than the outer one (movement more emphasized than form), or whether the outer reality is more dominant than the inner one (form more emphasized than movement). The adjustment of personality, of which introversion-extraversion, expansion-withdrawal, dominance-submission, realism-fantasy, activity-passivity are some manifestations, becomes especially visible in this kind of expressive behavior where the dynamics of personality appear in the dynamics of movement and form.

METHODS OF GRAPHO-ANALYSIS

Grapho-analysis is one method of analyzing expressive movements. Expressive movements reflect personality, but since personality is not the sum of single traits but an interrelation and fusion of traits, one expressive movement corresponds not to a single trait but to a total pattern. Such a total pattern, however, can hardly be recognized in one single expressive movement alone; it is therefore necessary to consider a single expressive movement in its relationship to other expressive movements of the same person. The more relationships are at our disposal the fuller can be the interpretation of personality. It is desirable to compare the expressive movements in their graphic reflection with expressive movements in their bodily reflection, with behavioral activities, and with the pattern of associations. It is important to know the objective motivation for a movement pattern, for instance a circular movement in order to draw a face; a subject's associations may be used in addition in order to explain specific elements of the movement, for instance a rhythmical curve in drawing a body if the drawing is supposed to represent a dancer.

If we have only graphic specimens at our disposal the following procedure is proposed:

1. *The frame of reference.*

The expressive value of a graphic specimen basically depends on: (a) age, (b) sex, (c) the conditions under which the graphic specimen was made. Concerning the age characteristics, those which are normal, e.g., at the age of 2, may be abnormal at the age of 4. Concerning sex, characteristics which are typical in expressions of a girl may be significant if exhibited by a boy, and vice versa. Conditions under which the graphic specimen was made are the kind of pencil (soft or hard) and the size of paper used. Small figures are more significant on a large sized paper than on a small sized one, and large figures are more significant on a small sized paper than on a large sized one. The handling of space is of special importance for judging the degree of movement and adaptation.

2. *Selection of content.*

The free choice of an object for representation is highly significant for studying the objects which play the most important role for a child, indicating the child's dominant associations. The significance he gives to his figures, as representing himself or father, mother, babies, animals, etc., may lead us to the idea which dominates the child. The situations a child chooses for his drawings may show personality trends, for instance, aggression, if emphasizing aggressive situations; escape, if emphasizing unreal situations, etc.

3. *Emphasis on certain features.*

Neither for the child, nor for the mature artist, nor in reality have all parts of an object equal significance; on the contrary, there are main features which determine the expression, but different features are leading in various individuals. The emphasis on certain features indicates the center of gravity in the sphere of expression. A child emphasizes features either because they correspond to his own leading features and forms of expression, or because the child suffers from the lack of these desired features. Whether the emphasis on a certain feature is the reflection of an actual or of a desired state may be decided by studying the content of the picture and the relationship of forms to each other.

4. *Expressiveness of graphic movements.*

Strong and weak pressure, continuity and interruption, angular lines and curves, shape and shapelessness, narrowness and width, sufficiency and inadequacy of movements, and several other criteria which we have already discussed, indicate degree and direction of the child's energy. The characteristics may roughly be divided into positive and negative indicators:

+	—
Strong pressure	Weak pressure
Determination	Irresolution
Continuity	Interruption
Curves	Angles
Width	Narrowness
Sufficiency	Insufficiency
Shape	Shapelessness

5. *Comparison of data.*

In a final analysis, statements regarding the different topics should be made separately so that the degree of evidence can be checked by different observations.

6. *The consistency of the movement pattern.*

The expressive value of a graphic specimen has a far higher reliability if we see a similar expression in various specimens made at different times. If we notice a change of expression, causes for such a change must be investigated.

TRAINING IN INTERPRETING GRAPHIC EXPRESSION

The interpretation of graphic expression does not have the value of a fixed scheme of correlations, but depends on the total impression of the graphic specimen from which the value of the single elements is determined. To become familiar with the expressive value of basic graphic forms, we should always try to reduce them to the bodily movements in which they originated. Now, with the bodily movements we can associate the condition and the environment in which they become effective. Personality interpretation demands in the first place a capacity for identification, for empathy, which children have to a high degree, but which is lost by the maturing personality as he differentiates from his environment. Therefore a new training in empathy must overcome that inner resistance in our personalities which originates in the fear of losing our own frame of reference. A long period of such training is required before the interpreter feels sure enough of not being submerged in a flood of expressions, and, like a swimmer, he cannot expect any positive result before the end of his training. Training in the understanding of graphic expression begins with a training in empathy, the method of which consists of four basic steps:

1. The reduction of abstract forms to concrete movements.
2. The training for associations, relating a movement to its appropriate condition and environment.
3. Training in the perception of one movement within its configuration, grasping the relationships, dependences, and determinations. This latter step involves the realization of the first two procedures for all different graphic forms at the same time, so that associations with the movement represented by one element are determined by associations related to the other elements.

4. The final part of an interpretation is the structuralization of features by the interpreter. Elements should be considered in their relationship to each other. Moreover, we have to grasp the outstanding feature around which all other elements are grouped, as around a center. Thus, the most important point for an interpretation is to obtain a starting point based upon the most striking element. In some cases the dominant element is obvious, in others it appears as a common denominator obtained by comparison of all elements with each other. The interpretation of expressive movements becomes productive only if the interpreter has the flexibility to make spontaneous and rapid transformations in his judgment due to the determination of one element by others.

The following is a finding list which may facilitate the interpretation of graphic elements, but which can by no means substitute for the main point of the analysis, that is, visualization of the element in its position within the whole, a configuration which always modifies the expressive value of the element itself, which thus is only a relative one and whose significance can only be considered as a hint and as a first approach. The following list of characteristics, indicated by graphic elements in drawings by young children, is to be considered merely as an approach to the evaluation of graphic expression as a *whole.*

TABLE OF GRAPHIC ELEMENTS IN DRAWINGS BY YOUNG CHILDREN

A. CHARACTER OF STROKES

Appearance	*Significance*
a) high pressure	force, vitality
b) low pressure	weakness
c) straight lines	quickness, decisiveness
d) interrupted lines	slowness, indecisiveness
e) confinement	inhibition
f) regularity	rhythm
g) sudden movements	impulses
h) monotonous movements	passivity, lack of differentiation
i) lines in different directions	impulses
j) circular curves	rhythm, swing
k) big and broad movements	expansion
l) narrow movements	restriction

B. CHARACTER OF FORMS

Appearance	*Significance*
a) forms at a very early age	high development
b) invented stereotypes (neither chance nor copied)	inventiveness
c) consistency of forms	decision
d) lack of form principle	lack of observation or imagination
e) good distribution at an early age	creative ability
f) bad distribution at a later age	rhythmical disturbance
g) differentiation of forms	capacity for adjustment
h) lack of differentiation	lack of orderliness and cleanliness
i) preference for big forms	tendency toward expansion
j) preference for small forms	discouragement, regression
k) great contrast of size	conflict
l) connection of forms by lines	ability to see relationships
m) embracing of smaller elements by larger ones	ability to integrate
n) free handling of forms	free approach to objects
o) exactness	ability in observing reality
p) fanciful forms	predominance of private world
q) the surrounding line	differentiation, protection, isolation

C. TEXTURE OF STROKES

Appearance	*Significance*
a) faint, wobbly lines	vagueness, passivity
b) preference for shadings	tactile sensitivity
c) preference for broad spotting	anal stage, unclean, disorderly
d) vague, hampered shape	inhibitions, fears
e) jittery lines	irritation
f) interruptions	stubbornness, negativism
g) oversharp lines	decisiveness, definiteness
h) liking for contrasts	decisiveness, definiteness
i) confinement of small lines	dreaminess
j) big lines made impulsively	activity

D. DIRECTION OF STROKES

Appearance	*Significance*
a) determined direction	determination, security
b) undetermined direction	lack of determination, insecurity
c) direction with interruptions	carefulness, premeditation
d) lack of direction and interruptions	vagueness, insecurity, lack of organization
e) preference for angular lines	tension, reflection, criticism, doubt, restraint *
f) preference for circular movements	balance, changing moods, evading any decision, manic-depressive*
g) preference for horizontal movements	rest, perseverance, weakness, feminine trends*
h) preference for vertical lines	motion, determination, nervous activity, masculine trends*
i) direction from top to bottom	introversion, anxiety, masochism, self-involvement, dreaminess†
j) direction from bottom to top	extraversion, domination, aggression, curiosity†
k) direction from right to left	introversion, self-determination, isolation, discouragement †
l) direction from left to right	extraversion, tendency to leadership, seeking for support †

E. TYPOLOGICAL VALUE OF GRAPHIC FORMS

1. *The realistic type*

Appearance	*Significance*
a) realistic manner of representation	more cycloid temper
b) exactness	observing
c) preference for contours	visual type
d) preference for curves	auditory type

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* The choice of one of these terms depends on the relationship of the graphic element to other graphic elements.

† The choice of one of these terms depends on the relationship of the graphic element to pressure.

Appearance	*Significance*
e) preference for contrasts	emotional type
f) secure movement	mobility
g) broad pressure	aggressiveness
h) pronounced change of movement	manic-depressive moods
i) dirty appearance	anal phase
j) overemphasis on details	lack of integration

2. *The abstract type*

Appearance	*Significance*
a) abstract manner of representation	more schizoid type
b) lack of exactness	more dreamy
c) preference for small details	self-consciousness
d) preference for angles	tension, private world
e) preference for shadings	tactual type, dreaminess
f) insecure movement	instability
g) sharp pressure	sadistic trends
h) schematism of movement	rigidity
i) overexactness	submission
j) bizarre figures	blocking of natural reactions
k) dissolution of forms	insecurity, absent-mindedness

DIAGNOSIS OF PERSONALITY THROUGH A BLIND ANALYSIS OF SCRIBBLINGS AND DRAWINGS

CASE MATERIAL

In a detailed analysis of graphic movements the examiner should check carefully all the items mentioned in our finding list; however, a mere summation of the data obtained would not lead to an understanding of the personality concerned. The interpreter should recognize the leading features and interweave them into one distinct pattern. What we call a "blind analysis" is an interpretation of drawings and scribblings without the interpreter's having any knowledge of the children but their sex and age. The author obtained several scribblings or drawings of one child and dictated his observations to a recorder during the process of the analysis. In a staff meeting the analysis was then compared with the behavioral observations on the same child. On the whole, the agreements were surprisingly high. The expression in the child's drawing was also compared with his expression in bodily posture. The author has discussed such converging approaches to a child's personality elsewhere.(614) In the following we present ten blind raw analyses out of about a hundred, with some abbreviations, in the form in which they were recorded at the Vassar College Nursery School and at the Beth Hayeled School for preschool children. The raw analysis reflects the interpreter's first impression.

I. Ann, a dreamy child (age 4.9) (see Fig. 55)

BLIND ANALYSIS FROM SCRIBBLINGS

May 5, 1941

INTERPRETER (drawing of man): "The movement is slow, premeditated, careful. She is not a child who just goes ahead and draws. She is slow and deliberate. The figures remind me of fairy tale figures; they show fantasy and originality. They are bizarre. The slowness of the strokes indicates that this fantasy is not free flowing and eruptive, but that it is tinged with fear and anxiety. The bizarre wavy outline emphasizes this even more. There is heavy pressure in drawing the arms and legs which is superimposed on the wavy, broken line which forms the outline. I would believe the child tries to overcome her fears and insecurity, but that this attempt has not much impulse; it is more directed by intellect than by emotion. Her use of the small area on the large Goodenough sheet indicates that she is quiet . . . plays by herself. There are no trends of expansion; there is no emphasis on movement.

"In summary, she is not a child with much movement. She doesn't run around, but plays quietly by herself. She is interested in fairy tales and bizarre things. She has not much contact with reality. In a certain way she is insecure. She is careful, rather pedantic, orderly, precise. She has a creativity of her own, but I would think from the slowness and carefulness evidenced here that she likes to do what others want her to do. She is not negativistic. This has implications of passivity. She is not a rebellious child, though it would be too much to call her submissive.

"I think this child needs care and psychotherapeutic treatment. I do not know whether her restriction is due to the environment or whether it is structural. But I would believe that she is dreamy and introspective. It is probably not good for her to hear too many fairy tales. She is too impressed by bizarre things."

Biographical Note

Ann is an adopted child; her main characteristic is an excessive fantasy life.

II. Bruno, a balanced child (age 4.2) (see Fig. 5)

BLIND ANALYSIS FROM SCRIBBLINGS

January 13, 1942

INTERPRETER: "I believe that this is a child who has quite a strong response to impressions and to any new situation at the beginning, but very soon establishes himself and regains his balance. At the very beginning he gives a very determined, emotional reaction, but this decreases and he regains his balanced attitude. If one can say so from these few lines, he is a characteristic artistic type, highly rhythmical. I don't know whether it is hereditary but I would believe there is high musical capacity and ability. He seems not to be a discouraged or neurotic child in any sense. His movements are open and expansive. All his senses are very well developed—sense of balance; rhythmic, acoustic, optic, tactile senses. He is a 'feeling type,' not an intellectual or rational type. He may show a strong resistance, determination, and be difficult to handle because he is a very fixed personality. He seems to like to play by himself, not so much with other children. He is not striving for a leading position in the group. I do not see any trends of neurosis. The prognosis is really quite encouraging and good."

Informal Discussion with the Worker

WORKER: "What is the best way to treat this child?"

INTERPRETER: "Progressive education will develop his artistic capacities. He will never become a rational, intellectual type. He needs a lot of freedom and material for projection. This child is basically an artistic type. If you forced him into strict surroundings you would create tensions."

WORKER: "How progressive? What limits? In some schools he might not get much direction."

INTERPRETER: "He needs direction as well as material for his development. But with many prohibitions and rules he will not get very much, he will slip away. There is no sense in breaking his attitude, you would break his artistic capacities but would not make him a rational person."

WORKER: "He doesn't seem to us to be focused and integrated. He is very difficult for us to understand."

INTERPRETER: "That might be quite productive—that he has so many interests. It depends on his being strong enough to develop a many-sided personality out of this. One shouldn't limit him but integrate him into the whole."

WORKER: "There is his way of responding emotionally to the new situation of school . . . imposing himself on as much of the situation as possible. He was in constant motion, turning everything upside down."

INTERPRETER: "He has such basic balance and rhythm, it all will be brought into his pattern."

WORKER: "He must have a long way to go. He doesn't seem to function on his age level. His tests are not average, but if you give him a little leeway on vocabulary—giving him credit for any word that sounds like the right word—he would test 114. He is very much on the 2-year level in everything else. The only thing we see is his functioning level, and he doesn't seem to be functioning on a 3-year level. Most of the comments we would uphold. But, will he always test below his age in intellectual matters?"

INTERPRETER: "I don't know. He will probably not have many intellectual interests."

WORKER: "School work will be a burden to him?"

INTERPRETER: "Yes, if he doesn't discover an interest that will fit into his pattern. He will never learn for the sake of learning; he will only learn if it fits into his scheme."

WORKER: "He is the most relaxed child I ever saw."

INTERPRETER: "That shows in his relaxed and balanced graphic movements."

Biographical Note

Bruno's parents are extremely interested in music and dancing. Bruno is really a "dancer"; his sister is not; his parents would prefer to have it the other way round.

III. Carola, an emotional child (age 5.2)

BLIND ANALYSIS FROM DRAWINGS

November 28, 1941

INTERPRETER: "I would say first, from the definite stroke which this child makes, the sharp contour of the line, the definite direction of strokes, and the heavy pressure, that this child knows very much what she wants. She has a very definite way of expression. She is already in the stage of a child who tries to separate herself from the surroundings—to establish a private sphere of action, and to develop individuality.

"She does not seem to be at all a weak child, but there seem to be some aggressive and highly emotional impulses. This is seen in the heavy pressure and the 'outburst' of strokes. But as these 'outbursting' strokes are either surrounded or held together in one form, I would believe she has developed an ability to dominate, to a certain degree, her impulses and aggressions. She seems to be more motoric than dreamy. If you can say it at such an early age, she has more masculine than feminine trends.

"The sequence of the drawings is interesting; more and more she breaks through with her impulses, the barriers crumble. The aggression seems not to be directed toward a certain person, but against the whole environment—whoever comes near her. She has already developed some inhibition for her aggression, but it breaks through. Probably she gets some prohibitions from the home environment. She is already checked in her aggression, but probably checked in the wrong way so that the aggression breaks through. That is, the aggression is checked but not transformed. One should try to transform the aggressive trend rather than check it, working it off in some field where it does not act destructively but only emotionally (e.g., building activities, where she can destroy what she has built). One should lead the aggressive trend away from the direction toward persons."

Biographical Note

The little girl grew up alone with her mother; the father had just arrived from abroad. The child considers the father an invader, depriving the child of her exclusive possession of the mother. The forced adjustment seemed to be the cause of her aggression.

IV. Ben, an emotionally disturbed child (age 5.4)

BLIND ANALYSIS FROM SCRIBBLINGS (II) *

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* Earlier, the child had drawn Figs. 9 and 10.

April 7, 1941

INTERPRETER: "The most striking thing in all three of these pictures is the heavy pressure of the strokes; we can see how deeply the pencil goes into the paper. In (2) the uninterrupted, definite movement going from side to side—the pushing movement—seems really to reflect a very high degree of aggression. These aggressive strokes seem in all the drawings to be secondary ones. The first strokes are of a different kind. (We can see that the heavy strokes cover the ones which were made before.) Characteristic of the covered strokes is that they fill up the paper. What do these strokes mean in relation to the pushing strokes? They seem to relate to expanse: to covering the whole with his own personality. Then, these two kinds of strokes are two different expressions of one and the same basic kind. In the pushing strokes we see the manifestation of aggression; in the other strokes we see domination (filling up the whole paper with his own personality).

"There is on the whole a lack of form and shape, giving a rather dirty appearance (only in the scribbling). I am not a Freudian, but many Freudian concepts seem well founded: the relationship between the anal stage and sadistic and aggressive tendencies. This child is in the anal-aggressive stage. These strokes do not push toward a determined corner of the page, but go in different directions. Therefore, I would say that the aggression is not aimed at a specific person, but is structural.

"In the drawing of a man, we see what we can't see in the scribblings at all: that the child has a definite and original way of representing objects. There is good configuration and determination. If I saw only this I would say that the child has high artistic abilities, and knows what he wants. The common feature in the scribblings and the man is the pressure of strokes and the expression of imminent danger (particularly in the drawing of a man on the lower half of the page: the hands are like claws; the figure resembles a scarecrow).

"The whole quadratic form and the lack of curves emphasize the expression of danger and of power. This seems to express the concept of power. This feeling of power is perhaps structural, or perhaps a reaction to the feeling of danger in his life—an attempt to confront the outer danger with his own power, to gather his own forces to meet this danger. He is a dominant child, probably difficult to handle. We can see on the one hand an extremely original, highly gifted child, and on the other, a child in danger of emotional disturbance."

WORKER: "How would all this show in behavior?"

INTERPRETER: "In aggression, insecurity, a high, somewhat sadistic, fantasy, destructive tendencies, tendency to dominate, a lack of calmness and quietness (he is always in motion, psychically and motorically). If you compare these pictures (scribblings and man) you see an enormous difference. In the one I would say you have a child on not a very high level being pushed by energies and inner tendencies. In the other you have a child on a very high level of development. Probably, in observing the child, you see these two different sides in different periods. There is probably always tension in his personality. In one period he transforms his energies into creative channels, and in the other period into destructive ones."

Biographical Note

The child, not knowing his father, who was abroad during the European war, is emotionally disturbed, partly owing to his mother's worrying.

V. Alice, an observing child (age 4.4)

BLIND ANALYSIS FROM SCRIBBLINGS

January 20, 1942

INTERPRETER: "The lines are sure, secure, and definite—the child knows exactly what she wants. She differentiates herself as an individual with her own way of expression. She is an active child, very vivid, interested in the world around her. She is not easy to satisfy; she is probably always asking questions, making comments and observations, criticisms, etc. Aside from her observation and objectivity, she is a highly artistic person and she is able to express what she observes.

"It is interesting that she draws a house which is like a human figure and very different from the usual pattern. The beautiful swing in the lines representing windows and doors is outstanding. The whole figure gives an unusual impression of height.

"Her definiteness and originality, activity and energy might make for some difficulties in educational situations. She is not a yielding type. There seem to be aggressive trends, which are clearly visible from the pressure and straightness of the strokes. Dreaminess does not play an important part. She has a creative imagination but does not show the typical trends of dreaminess."

Biographical Note

Alice is an observing type. Her definiteness, originality, creative imagination, and aggressiveness appear in all of her records.

VI. Robert, an aggressive child (age 4.6)

BLIND ANALYSIS FROM SCRIBBLINGS

December 9, 1940

INTERPRETER: "A very primitive stage; not absolutely infantile, but related to a neurotic phase. There are very strong impulses, not regulated in any form. He is aggressive—not in going to the children, but if somebody comes near him. Movements are uncoordinated. It seems difficult to make any contact with him; he is not social. He would not go straight away and be aggressive against the children, but it would be difficult to have any relations. He would not go near the others. I would imagine he would bite a person if the person came near him!

"It is necessary to investigate this child closely. He needs protection, observation, and kind treatment. He is very unshaped. Not only are his concepts unformed, but also emotional disturbances hinder him. It is like a deformation of the developmental level—not underdevelopment. I would think that he has a lack of contact—complete isolation—lack of being understood. This is probably not a structural factor. I would suppose he had no parents, that he had grown up in a foster home. You will not see his aggressions—but watch him when others approach him. He is unhappy, very unhappy."

Biographical Note

The development of Robert was especially studied in the laboratories of Sarah Lawrence College and Vassar College.(353) * He is one of the children to whom an experimental study of the present author refers.(614) * The teacher's summary on Robert is: (542) † "He is the most unpredictably aggressive child in the school, and the most violently aggressive when he is expressing hostilities of one kind or another."

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* P. 54. ("Robert" is referred to as "Alec.") Cf. Vassar Film Series: *This Is Robert* and *Finger Painting.*

VII. Rusty, a critical child (age 4.2)

BLIND ANALYSIS FROM SCRIBBLINGS

May 26, 1941

INTERPRETER: "The first thing I would say is that he is a child who has high expressiveness. The strokes are decisive and sure, the proportions of the drawing are well balanced. The expression is of a high originality. It is like a sketch; it shows a high degree of observation of how a person moves and sits. The few strokes suggest a portrait; he has a sense of symmetry and perspective.

"I would say that the immediate expression in these scribblings is of a certain strength and decisiveness; it shows organization, ability to see things in one relationship and under one head. The expression is not very happy, but that may be only in this picture. It is not weak. It shows a certain resistance, trend of opposition, mulishness. The child seems to emphasize mostly movement and attitudes and single features, eyes, nose, ears."

SECOND BLIND ANALYSIS FROM SCRIBBLINGS

January 13, 1942

INTERPRETER: "I would say that this boy is the opposite type from the first we had today.‡ He is much more intellectual and rational than the 'feeling type' that the other child represents. He is very observant and analytic, critical, interested in the happenings around him, in the world about him. The other boy is much more self-involved, preoccupied with his own emotions. This child is more objective. The drawing bears out his analytic attitude.§ There is not much swing, no curves or differentiation of movements. Again, this seems to hint that he is not the feeling type, not artistic, but much more intellectual, observant, critical, reflective."

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* Pp. 321 ff. (Alec).

† P. 21.

‡ Case II.

§ Picture described on page 141.

Biographical Note

Rusty's main characteristics from his behavior in the Nursery School are described as follows:(542) *

"Rusty's initial approach is characteristic of his caution in all new situations, but he easily makes himself at home. His chief interests are seen to be visual and exploratory."

Comment of his teacher: (542) † "I've never seen anyone who is so aware of things. He has to know where everything is and what it's for, and he instantly spots anything that is in a new place. He doesn't miss a trick."

VIII. Gertrude, a sensual child (age 5.0)

BLIND ANALYSIS FROM SCRIBBLINGS

May 5, 1941

INTERPRETER: "It is interesting that in the Goodenough drawing there is emphasis on the breasts, and in the smaller drawing there is emphasis on 'cheek,' and the carefully drawn hair that looks like a permanent. These features emphasize the child's own body, and the curls hint at some coquettish behavior. There is perhaps already a very early maturity and awareness of her feminine structure. In other words, her femininity seems to be strongly developed at this age.

"In the scribblings we see the very smooth movement of the curves, and the special emphasis on shading. This shading is in general the expression of a highly tactual sensitivity.

"Combining these two observations, body awareness and tactual sensitivity, you find an expression of high sensitivity with regard to her own body. She is probably more narcissistic than other children at this age. There are no intellectual or constructive trends. But she observes well (5 fingers and toes in the Goodenough drawing). The figures are well balanced. They are symmetrical, precise. On the one hand, we see the narcissistic, feminine coquette. On the other hand, we see that she uses very definite strokes and uses a strong pressure in all strokes. So we see decisiveness, determination, will. That would suggest that in all her behavior she is capricious."

WORKER: "Which of the two sides is outstanding?"

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* Pp. 14 ff.

† P. 16.

INTERPRETER: "The coquettish side is outstanding. The determination is secondary. The two combine to make her capricious, temperamental. She is not abstract, not dreamy. She is oriented in the things she sees, especially referring to her own body. She is especially sensitive to all sensations related to her own body."

WORKER: "It is interesting that when she was asked to draw a man she drew a girl."

INTERPRETER: "That stresses her interest in her own body or indicates that she does not know what the body of a man is."

Biographical Note

STAFF-MEMBER: "The coquettish, feminine side seems to be her wish-image. Actually she is more down to earth, more in contact with reality than you have pictured, according to the teachers' feelings about her. However, her mother dresses her like the feminine little girl that seems to be her ideal."

IX. Elise, a negativistic child (age 4.8)

BLIND ANALYSIS FROM SCRIBBLINGS

May 1, 1943

INTERPRETER: "The intellectual level of this child seems to me rather high, and basically there seems to be even an overdevelopment of individual personality with respect to this age. The child seems to be outspoken, self-willed, with significant trends of obstinacy and stubbornness. Probably she has strong spells of will and determination. She seems to have a 'masculine protest.' It may be difficult to influence her because of a lack of flexibility and obsequiousness. Probably she has sudden impulses of excitation which might appear biologically in a sudden blushing.

"There seem to be certain sadistic trends which, however, take the form of a self-tormenting connected with her spells of obstinacy. The child seems to have difficulties of adjustment. If making friends, she wants to take the leadership. She seems to observe very much how persons react, observing in a very exact way, and sometimes may be lost in observation which other people might take for a lack of attention.

"Her whole behavior probably results from a protest-attitude against her parents which develops inhibitions and resistance. There seems to be a definite lack of fluidity, of swing, and of rhythm, but not of vitality. She seems to have much more vitality than she can use, resulting in inhibitions. All her actions and reactions are carried out joltingly and with an intentional effort, not spontaneously. Her behavior does not seem to originate in a structural disposition but in inferiority feelings which are overcompensated by stubbornness.

"I believe that she is suffering from an organic disturbance, some hampering of movement, possibly stuttering; but I believe that her organic disturbance originates in a psychic tension. Anyway, careful medical examination is positively indicated!

"She seems not to be a dreamy child, but more a logical and skeptical one, and later on she may be much more interested in all matters of reality than in matters of fantasy and art. She seems to be very exact and orderly. There are already negativistic trends and not only a personal suffering but an understanding of the suffering of men. Upon the whole, this seems to be a definite case for psychotherapeutic treatment."

Biographical Note

The actual psychosomatic disturbance was also revealed by a Rorschach analysis.

X. George, an isolated child (age 4.4)

BLIND ANALYSIS FROM SCRIBBLINGS

December 16, 1941

INTERPRETER: "I would believe that this is a very masculine boy; these drawings don't show the flexibility and softness which some of the other children show. All the movements are very heavy, made with pressure, and there is a preference for vertical lines. There is no indication of swinging curves and of soft wavy lines. Thus I would not assume that this boy has pronounced creative abilities or is very sensitive or responsive. He is probably much more interested in constructive activities—building, constructing, etc.

"He is much more realistic than artistic. That is, he will probably develop later along more realistic lines than he will along imaginative lines. This realism is now only in the very beginning. He has not even many pictures or images to demonstrate his realistic attitude, but he will develop in this direction.

His lack of combining features indicates a certain lack of relationship to objects and to persons. He is probably very much preoccupied with himself and with what he is doing and does not go from one thing to another easily, nor does he easily make contacts with different people. He is somewhat rigid.

"He is not weak. He has good vitality and self-determination combined with a lack of receptivity and adaptability. This suggests that he is difficult to handle. He is not a discouraged child, but I repeat that there are probably difficulties in his adjustment to the children and the group. He has not much sense of organization, and it would be difficult for him to fit himself into the organized pattern established by the group."

BLIND ANALYSIS FROM DRAWINGS

February 20, 1942 (Figs. 39, 40)

INTERPRETER: "In the content of the pictures there appears a preponderance of cars, trains, and trucks. In general, cars and trains have an appeal for children because of their movement on the one hand and their constructivity on the other—they symbolize organized, chained movement, movement following a definite, prescribed line (as rails, tracks). This viewpoint might be related to the picture of the 'terrible big animal' which is put into a cage and which shows again that the terrible, uncoordinated movements of dangerous, menacing animals are chained, fenced, controlled.

"The child seems to express here, as all children do in their drawings, the situation of his own personality. He has a trend for much movement, not only outer but also inner movements, but he is forced by the environment to chain these movements and control them. He feels his isolation."

Biographical Note

The "graphic dream" of this child is described on pages 128 ff of the present study. It is the story of a child who feels his isolation in his family. The inner isolation resulted in a fear of other people, including other children. A teacher's record from October 22, 1941, says: "The first day, when he saw the large sleeping room he gave it one thoroughgoing look, and with terror in his voice said, 'I'm not going to sleep there . . . too many children. I'm going to sleep in a room alone.' He was given a room alone. He accepted sleeping there and was very soon ready to go to the sleeping room, where he has had no difficulty."

Our "blind analyses" proved to be a great help in the educational guidance of the children. In some cases the analysis emphasized dangerous attitudes which were just *in statu nascendi* and not yet fully recognized from the daily life behavior of the children, so that preventive measures could be taken.

A comparison of our analyses with Rorschach analyses indicated that the graphic analysis penetrates more into the depth of the child's genuine structure, below the level of compensations and masks, while the Rorschach analysis refers more to the overt status of behavior. Our study of expressive movements, combined with the Rorschach study(56, 336) of projected imaginings, and related to an analytical study of motivations and to behavioristic observation of activities, promises to give a full picture of the personality of the preschool child.

REFERENCES

(Numbers refer to those in the general bibliography.)

Projective methods

56, 62, 193, 258, 283, 336, 353, 356, 553, 614, 615.

Expressive movements

15, 349, 364, 542, 614, 615.

Motor development

53, 151, 223, 232, 252, 415, 487, 598.

PART III

THEORY

Chapter IX

PRINCIPLES OF CHILDREN'S ART

THE AESTHETIC VIEWPOINT OF CHILD AND OF ADULT

THE layman, when judging the drawing of a child, is able to make an approach to the expression of the child only from the viewpoint of an adult. Seeing the uncoordinated lines of the young child, he sees no sense at all in this representation, perhaps a mere play of movement, because if the adult wishes to express something, he uses certain forms and figures derived from his perception. He does not put the question whether the perceptions of the child are perhaps organized differently from those of the adult. If the child is already in that stage where his inner images correspond to his outer perceptions, the adult judges them according to aesthetic or intellectual principles. The picture has for him a higher value if the objects represented correspond closely to their appearance in reality; if the picture is organized following a principle of balance; if the representation corresponds to the content which it aims to represent; and if colors are used in harmony. This is the viewpoint of the adult, but it is not necessarily that of the child.

Besides a realistic approach in graphic expression, there exists a symbolic approach which has only the aim of evoking certain associations about particular objects. Even the adult artist generally draws a figure that is not as realistic as a photograph, but he is satisfied if the figure evokes certain associations in the spectator. The same holds true for the child, only his associations are different from those of the adult.

For the adult the sense of balance also is closely connected with his experiences of the optical reality, while for the child it is connected with his experiences of the inner reality. Head, arms, and legs have for the child more significance than the trunk, so that if he neglects the trunk, he wishes to express himself only by significant features.

From an adult's viewpoint, a chaotic distribution of different figures and objects indicates a very low level of expressiveness; but the child might indicate by such an apparently chaotic distribution a certain relationship of objects according to their subjective significance. Mere symmetrical balance is static, while a balance accomplished by different forms and different movements is dynamic. Just as the static type of Greek art is not inferior to the dynamic type of Gothic art, both being expressions of a different world concept, so both forms of expression, the static and the dynamic, have an equal value in children's representations.

While for the adult the content of pictures is usually expressed more by naturalistic features, the child expresses a content more by imaginary features and patterns of movement. If, for instance, we classify children's drawings according to their degree of violence, a child's naturalistic picture of a war scene might be less violent than his drawing of flowers. Bombs in a war picture might be mere reproductions of pictures which the child saw without having understood them; their form might resemble that of eggs, and the apparent realism might not be realism from the child's point of view. But violence in the child's sphere might appear in a high pressure of strokes, in an oversharp emphasis on outlines, in a contrast of big and small forms, and in disharmonious colors.

Just as many adult artists represent only principal elements in order that the observer may associate the omitted details, so the child represents only main elements and omits certain details which are so unimportant to him that they do not need any representation. The adult observer, not living in the child's reality, sees unconnected elements and considers them senseless.

Thus to judge a child's graphic expression we must reconstruct the missing links, as a criminologist reconstructs an event from unconnected clues, or as an archaeologist reconstructs an object from fragments.

Looking upon children's drawings from the first stage of scribbling to the development of primitive forms and figures, one observes several factors which all early graphic expressions of children have in common and which usually are misinterpreted from an adult's point of view:

1. The stages of scribbling and of early drawing seem to flow

into each other. Scribblings are more or less organized lines and curves which apparently have no concrete meaning. In early drawings, when certain graphic forms seem to have crystallized, an approach is made to drawing figures which have some similarity to objects of perception. But these forms and figures are still combined with lines and curves from the scribbling stage; phases of drawing and scribbling alternate, and often the child, though already capable of drawing, makes scribblings to represent objects of perception.

2. At first glance scribblings as well as early drawings seem to lack a sense of proportion. In scribblings, the lines seem not to follow any intentional pattern. In drawings, giant heads are put upon dwarfish bodies, one arm is long, the other short, ears may be bigger than the head, legs or arms may grow from the head, etc.

3. There seems to be a completely incorrect orientation of figures in space; figures which are perceived as standing upright are drawn in horizontal position or mirrored or upside down; there is a lack of perspective; body parts which cannot be seen, for example two eyes in a profile, are drawn nevertheless; walls of a room become transparent, showing figures behind them.

4. Figures and forms are incongruously mixed; birds are given four legs, objects are given eyes and ears, certain important parts may be missing, faces lack ears or eyes, figures lack arms and legs.

5. The aesthetic sense seems not to be developed. Figures and objects are superimposed upon each other; some forms are crossed by other forms.

Thus, on the whole the graphic specimen of the child seems to be either meaningless or defective, lacking proportion, orientation, synthesis, and a sense of aesthetics. If we judge children's drawings from the viewpoint of an adult's standards we must put them aside as the product of a completely undeveloped or abnormal mentality.

It must be conceded, however, that infantile graphic expression shows similarities not only to that of primitive peoples, but also to that of developed cultures. A lack of perspective and orientation in space appears in medieval art; a synthesis, realistically wrong, between parts of the human and the animal body in Egyptian art; persons with several arms in Indian art; and many observers educated on classical lines would see in some modern paintings of famous artists a lack of aesthetics.

Taking the viewpoint of a psychologist and comparing the infantile expression of a pictorial world with that of the average adult, we find that the average adult, untrained in graphic expression, is generally unable to draw an object with correct proportions and with a correct orientation in space. He frequently is much less able to express himself graphically than the child.(293) Principles of the child's world conception reappear in an adult's dreams.

Thus the characteristics of children's graphic expression seem not to be meaningless but can be considered as a certain style of expression, and we must ask ourselves whether the proportions, despite our contrary way of seeing objects, are wrong or have certain regularities of another order; whether the wrong orientation in space may not be an adequate expression of seeing things from a certain viewpoint; whether the lack of synthesis in our sense is not a synthesis of another kind; whether the apparent lack of aesthetics may not be a specific style. It seems to be impossible to explain these factors psychologically only by a lack of training and experience, because the adult, full of experiences and trained to observe objects correctly, and even the artist, trained to express himself correctly, go back to this early style of expression when dreaming or when doodling. It is typical of human reaction that an individual tends to judge in an affective way phenomena which do not coincide with his own behavior. If these phenomena represent his wishes and ideals, he is inclined to overvalue them and, if they evoke fear and disgust, to undervalue them. The psychologist must first of all seek to understand expressive behavior; trying to understand it, he must always search for the presence and not for the absence of meaning.

THE NEGATIVE ATTITUDE TOWARD CHILDREN'S DRAWINGS

Nevertheless, in regard to children's drawings most psychologists take the negative course of enumerating the absence of values and meanings in children's drawings. According to Karl Bühler,(100) * the scribblings of young children have no meaning whatsoever. However, observing children's drawings in different moods, one comes to just the opposite conclusion, which is that of Sully,(547) * namely, that the most various moods—"grinning and rudeness, mad excitement and intoxicated joy"—find their immediate expression in children's graphic movements. Kerschensteiner(327) concludes that children cannot express themselves in their drawings, because "the same formula is used to represent a funeral procession or a snowball fight." Actually, the snowball fight may have for a certain child the affective value of a real fight, funeral and snowball fight thus being pretty similar as to the seriousness of the situation, while for an-

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* Pp. 184-85.

other child the ceremonies of a funeral offer as much fun as a snowball fight. Use of the same formula for different things may be of a much higher expressiveness than the elaborate conventional differentiation of an adult. To justify Helga Eng's(173) * statement: "Pure scribbling is a planless and expressionless drawing, which is carried out without a definite purpose and in no way expresses the child's imaginings," we would have to know the child's imaginings. Anyway, the structure of the child's imaginings seems to be very similar to an adult's imaginings when dreaming by day or by night, where associations seem to follow each other in an apparently "planless" manner. If we ask a child for the significance of his drawing, which to the layman may appear just as planless and expressionless as a Picasso appears to a classicist, we usually get a more definite association for each line than we would get from an adult. Bühler tries to devaluate even such a fact; he maintains that the child, giving his scribbled lines a name, only imitates the adult, without having any representative intention. Bühler considers scribblings as a mere game of movement in which the child frequently does not realize that there is a connection between the movement of his hand and the lines which thereby appear on the paper. The fact that a child names different lines differently, but repeats both lines and names at different times in a very similar manner, speaks against such an hypothesis.

Almost all investigators of children's drawings unanimously advance the theory that beginning and further development of children's drawings depend upon imitation. The child, they maintain, copies the drawings of others and his own drawings. However, in the first place, most young children do not even have an occasion to copy a drawing from another child. Even in nursery schools it is easy to observe that a child is completely uninterested in the drawings of his companions. If we only compare the manner in which a human figure is drawn by different children of the same age in one nursery school, we find a much greater difference in the conception of the human figure in each of them than in artists of the most widely different schools. The statement that the child copies his own drawings is as correct as it would be to define an artist's style by saying that he always copies himself. On the contrary, the variety of forms and styles that appear during the development of the same child is much greater than the variety of style in an artist's work. There are only a few stereotyped patterns which the child "learns"

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* P. 105.

from the adult, such as the form of a house or of a tree. Such patterns frequently are imitated and repeated like an acquired letter form.

As we have seen, the child lives in a world of imagination which is different from that of the adult, who, in the words of the investigators referred to, considers the child's expression as blurred and incomplete. A pygmy, with his own mental picture of his religious ceremonies and the elephant hunt, would certainly consider the civilized man's mental pictures of these things as blurred and incomplete. Judgment of one culture as being complete and the other as being blurred would seem to have less scientific value than to study the differences of their cultural manifestations and to search for the reasons for such differences.

THE MEANING OF WRONG PROPORTIONS

Most observers of children's drawings agree, with S. Levinstein,(355) that "Children have no conception of proportion," and with K. Bühler,(100) * that "The first human figures are sketchy and incomplete and without proportions." But the lack of proportions appears in drawings of concrete objects and not in abstract design, and if we compare different representational drawings made by the same child we observe that a lack of proportions may appear only in human figures and not in houses, or vice versa. A measurement of proportions in the abstract designs of one child may show the presence of very exact proportions, an especial sense of symmetry and rhythm, so that we cannot conclude that the partial absence of proportions is a lack of this sense.

If we compare the drawings made by a 4-year-old girl, presented in this study, we notice that some, as for instance the picture "funny Mother" (Fig. 27), show wrong proportions while the proportions in other drawings, as for instance that of Cinderella (Fig. 2), are highly developed. Frequently the lack of proportions seems to be used as an artistic means of caricature.

The presence of correct proportions in some drawings and their absence in other drawings of the same child hint that the absence of proportion in a particular case is a psychological factor. If we ask a child to explain an apparently wrong proportion, for instance, a human face with an oversized eye, then the child may emphasize this feature in his explanation, saying, "Look at this big, big eye!" An analysis will reveal that the eye has for the child a symbolic

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* Pp. 109 and 170.

meaning. It is, for instance, so big because it embraces all things with its look, or it is a symbol for father or for mother who see all things which the child would like to hide from them. Thus we may conclude that wrong proportions are for the child affective proportions; the child emphasizes with the wrong proportion a leading feature, as the artist emphasizes the leading figure in his picture by position and color. The wrong proportion thus appears not as a negative defective sign but as a positive creative one; it is a matter of the child's artistic style. Victor Loewenfeld (375) is one of the few, if not the only investigator, whose explanation of the problem of wrong proportions is in agreement with our findings:*

> The child draws "objective proportions" of objects only when he stands in no special relation to them. We are therefore compelled to recognize that proportions, and in many cases, also changes in representative symbols, are to the widest possible degree dependent on the subjective attitudes called out by an experience. We therefore no longer have the right to speak of "false proportions" since judgment is determined by our visual attitude of "objective experience of the environment." On the contrary, it is only when we understand the reasons for these apparent disproportions that we are able to penetrate into the true roots of creativeness.

THE SPATIAL CONCEPT

When the child draws letters mirror-wise or in a horizontal position one can speak of an incorrect spatial orientation only if the child knows the use of letters, which, however, mostly have only an ornamental value for him. The position of letters is a convention, and the child feels no restriction about turning them around like his ball. There is no need to explain the displacement by disturbances in the enervation of the muscles or by other biological factors, as many investigators do.

When we speak of incorrect orientation in space in children's drawings we assume that the child should copy exactly what he sees. Artists have a very different opinion: they feel no inhibition about putting one figure over the other, as in portals of Gothic cathedrals; about drawing the donor of a painting dwarfed, as in some medieval pictures; about changing completely the position of figures in space, as in drawings of primitive people (Fig. 113) or as in paintings of modern masters (e.g., Chagall). A drawing or a painting is an expression of mental concepts rather than a photograph of nature. The idea that an object in nature, large in size, in three dimensions, or in

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* P. 38.

Fig. 113

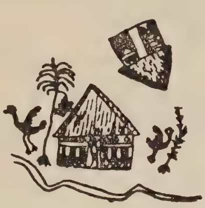
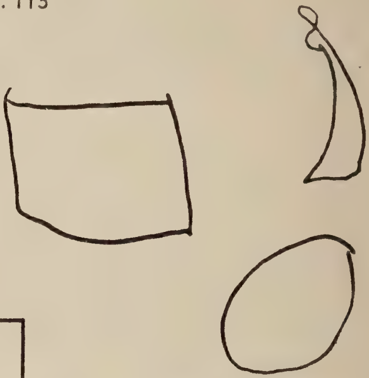


Fig. 115



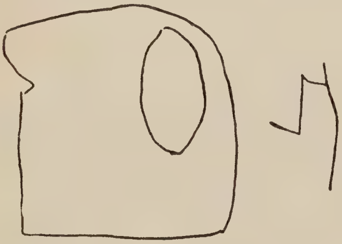


Fig. 114

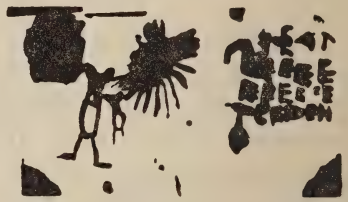


Fig. 116

Figs. 113-116. Expression of Form and Space action can be properly represented by a drawing seems to be more paradoxical than are a child's unnaturalistic proportions. What does Bühler mean when he says that the child cannot "see properly"? The child sees properly according to his mental structure, and the adult sees properly according to his structure. An American adult, overlooking some details in Navajo sand paintings because unaware of their significance, would, in the eyes of a Navajo child for whom these details are leading features, be seeing very improperly. If a child omits some features, for instance the arms, this does not necessarily mean that the child has either a defective perception or an inability for representation. In one case, a 3-year-old child, drawing his sister, remarked: "My sister has no arms, I don't want to give her arms" (Fig. 51). Thus the lack of arms appeared as conditioned by aggression. In another case a little girl drew herself without arms, and the analysis revealed that the child was projecting her wish not to use her hands for masturbation. Omitted features such as the arms may have a magic value, being either an aggressive wish (first case) or a taboo (second case). Some missing features, however, may be considered by the child as of no importance in a drawing in which only main features are represented. Such missing features may be of no more value to the child than an omitted button on a dress would be to the artist.

THE SYNTHESIS

Characteristic of children's drawings is their synthesis, which very often does not coincide with objects as we see them. The body, for instance, may be omitted, the legs being attached directly to the head. Investigators treat this factor too in negative terms, comparing it to the "defective powers of synthesis" of primitive people and the mentally diseased. It has become a custom in psychology to identify different manifestations if they have some elements in common. Very elementary experience suggests that this need not be the case at all. The fact that a parrot and a man both use speech does not make them similar. If we find similar factors in different beings we must investigate whether such factors also have similar functions. This is not at all the case with children, primitive people, and abnormal people, because abnormal people are abnormal, primitive people are primitive, and children are children! Even if they show similarities of expression, their structure is as different from each other as that of a little child from an adult. In the same way we are not justified, when comparing a child's synthesis with an adult's synthesis, in calling the former "defective." The child's synthesis is structurally of another kind than that of the adult. For a child a human being is a person who speaks, sees, and hears—characteristics which are all connected with the face; he is, furthermore, a person who acts, a characteristic connected with the arms, and a person who moves, a characteristic connected with the legs. The trunk is of no importance, and, as Levinstein remarks:* "The body merely plays the part of a hook on which everything can be hung." The structure of a drawing, even the most elaborate one, permits only the giving of a selection of features and items if compared with the multiplicity of factors in the original object. Art can rarely repeat reality; it can only suggest reality, and to do so with the greatest economy of means is generally considered one of the principles of art. Thus the child's reduction may be considered as an example of high synthesis.

THE EMPHASIS

One of the main viewpoints from which children's drawings have been considered is that of aesthetics. The problem of aesthetics is one of the greatest riddles in art, philosophy, and psychology. If aesthetics is related to rhythm and proportion, children's drawings should show a high degree of aesthetic value, because their measurements reveal a very high sense of proportion and symmetry. If aesthetics is related to a selection and configuration of expressive elements, again children's drawings should rate very high in aesthetic value. The attitude of students in our field has not changed much since Sully, one of the first investigators, drew attention to the feeble development of the aesthetic sense in children. Karl Bühler tries to demonstrate the artistic composition in children's drawings with the following words:†

> Imagine the principal parts of several human figures cut out of different books and mixed together. If these parts are now combined again, we shall obtain a chaos of proportions. If we remember that something similar is happening in a child's additive drawings, we shall better be able to judge them.

A "cocktail" of noses, legs, arms, and hands, which Bühler believes to be the constitutive principle of a child's graphic expression, exists only in the eyes of the adult who does not know the imaginary connections between the different sizes, of which we shall construct an example. The child wishes to express the idea: "I want to be rid of these adults who always ridicule me. My drawing has a big nose like Uncle A., who always ridicules me though he looks funny himself. The big eyes are those of Aunt B., who tries to find a spot on my dress. The little hands are those of father, so that he cannot hurt me with them," etc., etc. Here the picture is a synthesis of many associations connected with one basic concept, and if we could understand this language we would say that the little artist gives a perfect projection of his inner world by symbolic means. It is very often stated that "children draw what they *know,* not what they see." This statement leaves out what seems to be the most important element in children's drawings, namely, the emotional factor. In this connection F. G. Hartlaub remarks:(260) "A child at play does not merely want to tell or place before himself what he knows, but rather those parts of his knowledge that seem to him important."

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* Op. cit., p. 10.

† Op. cit., p. 116.

In all their activities children are interested in producing not merely what they know, but that which excites them, either in the positive sense, what they wish to have, to do, or to happen, or, in the negative sense, persons, objects, or happenings which they wish to ignore. The kind of representation seen in children's drawings has sometimes been compared with the kind of representation found in dreams, as both have the characteristics of condensation, strange orientation in space, and an associative and symbolic character. Modern psychology has found that the factors in which dreams originate are always emotional ones, either wishes or fears. The representation of fears seems to bring the dreamer as well as the drawing child nearer to the goal; with the representation of fears the visualizing person tries to become accustomed to the frightening picture and to overcome the fear. What children emphasize in their artistic manifestations serves for the development of their own personality.

AESTHETIC PREFERENCES

When we asked twenty preschool children to state their preferences for three wooden forms, a square, a triangle, and a circle, telling which they liked best and which least, the results were not very reliable. Each child preferred that form which was nearest to him. If we changed the position of the forms we got other preferences. Thus it seems that children in general have no consciously established form preferences. The few children who stated preferences used the form elements as parts of objects, for instance, the square as a house, the triangle as a roof, and the circle as a garden in which the house stood, or as a chimney; or the square stood for a car, the circle for a wheel, and the triangle for a man sitting in the car. In such cases the order of preference was determined by the succession of elements in the imagined objects, seen from top to bottom or from left to right. The child identifying the circle with the chimney, the triangle with the roof, the square with the house, thus had the preference: circle—triangle—square (seen from top to bottom). The child is determined in his preferences not so much by selection, as the adult is, as by the succession of stimuli perceived. This indicates that general statements about the aesthetic preferences of young children are very difficult to make.

A similar observation was made with color preferences. We showed the children five colors which were made meaningful by using colored wooden trucks that were identical in form and could be combined with each other. The experimenter told each child, "I have here some colored trucks. Which is the most beautiful, so that we may put it first? Which should come next?" etc. Although there was a slight preference for red and blue, the children were influenced here too by the position of the colored trucks, so that no decisive statement about a child's individual color preferences could be made. We thus might be inclined to deduce that young children have no distinct preferences for form and color. However, another experiment indicated that young children are only not able to express abstract preferences; if these preferences are made meaningful in terms of the child's concrete way of thinking distinct responses may be elicited. We presented to our children little boxes painted in blue, red, yellow, orange, green, purple, black, and white, and the child was asked to choose a nice colored box which he or she was going to take to his best friend, then another box for his "next best friend," and finally one for a "bad child." To find out whether the child's preferences, which now appeared, were general color preferences or were determined by the specific colored object, various colored objects were used—colored flowers, colored paper dolls of a man, a dog. When a child now showed a distinct preference or dislike for a color, an investigation indicated that it was due to associations with experiences. One child preferred blue, "because daddy's eyes are blue"; one selected green, because it was the father's preferred color. Second and third choices were inconsistent. There was an indication that darker colors were more preferred at night than during the daytime. When we measured the time which the child needed for making his choice, we found that usually less time was required if the child selected between a liked and a disliked color than when he chose between many liked colors. Color preferences became even more significant when the choice was linked up with an emotional experience. Such a situation was created by making a set of paper dolls in different sizes and different colors, telling the child that one doll should represent the father, the other the mother, one the brother, one the sister, one himself. In addition, little paper disks were made separately, showing a happy, a sad, and a mean face, and the child was asked to attach the faces to the paper dolls. A majority of the children selected darker colors for the fathers, brighter colors for the mothers, and the self-figure was also chosen in the bright color group. There was frequently a consistency between a liked color and a happy face, and between a disliked color and a sad or mean face. A record will serve as an example (B.C.):

Observer's remarks:	*Eddie's reactions:*
	"Let's hurry up and play. I want this one for my little brother." Etc.
	He picked a
	(1) Big black doll for his brother
	(2) Medium yellow doll for his mother
	(3) Big purple doll for himself.
	"This is me," he said, poking at his chest emphatically.
"Do you like purple?"	"No, it's mean."
"Are you mean, Eddie?"	"Only sometimes." Switches quickly to another subject.
	(4) Little purple doll for his father.
"Are you like your father?"	"No."
	(5) Little green one for Conny (a little friend who was standing by).
	(6) Medium black doll for his little sister.
"What is your little sister's name?"	"I haven't got one."
	(7) Big white doll for his grandmother.
	(8) Little black doll for his grandfather.
"Now let's put faces on your family."	Excitedly he spreads all the faces out in front of him. He puts:
	(1) A smiling face on the purple doll he picked as himself.
"Are you always smiling?"	"When I am glad I smile."
	(2) He puts a smiling face on the yellow doll for his mother.
	(3) A sad face on the black doll for his sister.

	(4) A sad face on the black doll for his brother.
	(5) A smiling face on the green doll for his friend Conny.
	He proceeds to jump up and down in an excited manner.
"What is your favorite color?"	"Yellow, my mother wears a yellow sweater." He looks at his own sweater. "This is green, isn't it? I like green." He pushes all the faces away. "I want to put them all over there away from me." He shoves them around the table and stamps his feet gleefully. "Am I a bad boy?"
"Not a very bad boy."	"I will fix them for you and be good." He puts all the faces and dolls in a neat pile and smiles pleasantly at the observer.
"That's all, Eddie."	"I want to play some more, can't I play some more, huh?"
"There is no more time."	"I like playing family, I can play again, can't I?"
"Yes."	He leaves the table, smiling.

The child's preferred colors are yellow and green, which he relates to mother and friend. The disliked color is black, which he relates to his brother and an imagined sister. Purple is for him an emotional color, which he calls "mean" and relates to himself and to his father. Another experiment with the same child, to which we have referred before (see page 143), indicates that the child has a negative reaction to his father.

Our experiment indicates that young children have color preferences, but that they become manifest only if the color experiment is done within the orbit of a child's emotional experiences. The child seems not to be able to evaluate a part detached from the whole, because the part does not evoke his associations or imagery.

A similar tendency appears in children's picture drawings, in which the normal child emphasizes the whole and not the parts. G. Hildreth(273) made the following observations:*

> The first drawings were complete units. They symbolized totality, rather than any single aspect of the whole or a miscellaneous aggregation of parts. These "wholes" were at first vaguely, crudely portrayed, so crudely that it is difficult in the beginning of the series to interpret what the child has drawn. The first trains were represented simply as circular scribbles, but these scribbles

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* Pp. 142 ff.

invariably stood for the whole locomotive or train. Apparently to the child just emerging from babyhood the engine appears to be a large round mass. The details are unimportant to him.

The emphasis of a detail is unimportant to a normal child; if a child dwells on small details, as for instance in showing the holes in a button (see Fig. 106), this is a sign of a "split consciousness," of an emotional disturbance. Such tendencies are found in schizoid and epileptic children. (Fig. 106.)

The twenty preschool children mentioned above, when asked to copy a circle, a square, and a triangle from wooden forms, were able to draw a square and a circular shape, but no child was able to draw correctly a triangular shape (cf. Figs. 114, 115). The children, when questioned what these forms meant to them, described for instance the square as a house, the circle as a wheel, but few were able to interpret a triangle. Several of these children, however, used the triangular form in their representation of human beings (see Fig. 27), or as the shape of a hat (Fig. 35), or as the form of a house (Fig. 42). The child seems to be able to draw forms only if they suggest meaning, if they evoke associations. Letters, for instance, become meaningful for a child if they are conceived as animated (Fig. 13) or if their pattern can be related to familiar images. A 5-year-old boy, practicing the shapes of letters, did so by associating with them the shapes of animals and with the letter *E* for instance the rays of the sun; he accompanied his alphabetic attempt with pictures, the shapes of which corresponded to the shapes of the letters (Fig. 116). Thus, the main principle of a child's artistic expression is its ideographic character. The concept of art as imitation is as alien to the young child as the concept of art for art's sake; for the child art is self-expression.

ASPECTS OF STUDYING CHILDREN'S DRAWINGS

The studies of children's drawings deal in general with the following questions:

1. Children's choice of objects for their drawings and the ability to represent objects in different age groups.
2. Differences between performances of boys and of girls.
3. Comparison between the graphic expression of children and of primitive peoples.
4. Comparison between the graphic expression of children and of subnormal people.
5. Measurement of drawing ability in children.

6. Measurement of intellectual ability in children.

7. Principles of aesthetic judgment and of aesthetic expression in children.

8. The development of one child's personality, as seen through his drawings.

9. Diagnosis of children's personalities from drawings.

In the following we shall discuss briefly each of the nine points mentioned.

1. The choice of objects(42, 131, 386) depends on the child's individual experiences, and, as demonstrated by several investigators, even if children of a certain age prefer to draw the same thing—for instance, a house—each child will have an individual projection upon this figure. The preferred object has for each child an individual meaning, just as all medieval artists painted the same figure of Christ in an individual way. The ability to represent objects in different age groups has indicated certain age norms in the graphic handling of objects and figures. The development of perception and drawing ability follows certain stages in which Kerschensteiner(327) distinguished the schematic stage, the visual stage, and the perspective stage; but within such age norms the individuality of each child is as different as each artist is different from another one within the norms given by the style of the period.

2. Differences of the sexes in their drawing ability(110, 361) were claimed by several investigators. Kerschensteiner, for instance, found that boys excel girls in all types of drawings except ornamental designs, in which girls surpass boys. The present author did not observe such differences in the drawings of young children; findings in expressive movements generally indicate that sex differences are much less expressive than personality differences.

3. Many comparisons were made between the graphic expression of children and that of primitive peoples.(19, 164) There exist not only similarities between the graphic expression of the child and of primitive man, but also similarities in the world conception of both. However, the life of primitive man and that of a child today are so different from each other that the partial similarities are related to different contexts, and what appears as similar may have a different meaning.

4. Comparisons between the drawings of children and subnormal people(66, 409, 495) have led to the belief that children's graphic expression is a manifestation of the undeveloped personality. G. Rouma remarked that the drawings of subnormal children are simi-

lar to those of younger normal children. But if there are certain characteristics in the drawings of subnormal children we cannot confuse those characteristics, due to deficiencies in perception and expression, with expressions of normal children, which are due to a certain world conception. For instance, a combination of incongruous forms may be due to an inability to separate concepts or it may be symbolic expression, emphasizing common elements in different things.

5. By a measurement of drawing ability(129, 138) it was hoped to draw conclusions for the general development of the child's personality. However, the artistic ability of the mentally diseased and the poor drawing ability of many geniuses suggest that a measurement of drawing ability does not give a key to the level of development.

6. Several studies were made to measure the intellectual maturity of the child from his kind of drawings. The tests developed by Goodenough(224) and Pintner-Toops(472) certainly give us a general insight into the child's level of intelligence but we have to consider those cases of children having a special drawing ability which need not conform with other abilities. On the other hand, a child may have a special deficiency in graphic representation which may be an isolated phenomenon, since everybody has some underdeveloped faculty. Furthermore, that which is scored as a deficiency may have a positive expressive value if the child expresses a definite concept by omitting or overemphasizing certain features. For instance, omitting the arms in drawing a man may be a symbol of aggression (see p. 141); overemphasizing the eyes may express the wish to see a certain thing (see p. 138). But even if we know the general intelligence of a child we do not know his personality. It has been observed that even a genius might rank very low in tests of intelligence, because intelligence means the ability to perceive general relationships, and the genius or a child, dominated by the subjective relationships of his private world, may not be open to objective relationships.

7. Principles of aesthetic judgment and of aesthetic expression(145, 375) play a part as great as intelligence in the development of personality. While intelligence is a manifestation of the conscious part of personality, rhythm, balance, and proportion are manifestations of the unconscious part of personality. As the development of the conscious appears after the development of the unconscious, we may expect in children a generally higher development of

rhythmical than of intellectual qualities. Several studies have been made on the perception of rhythm and balance in children, but very few on children's expression of rhythm.

8. The development of an individual child's personality as revealed by his drawings has been studied by several observers.(173, 273) These studies emphasize the fluctuations from day to day in a child's drawings, or the growth of drawing ability and synthesizing capacity, or they use the material for a demonstration of the child's special and of children's general concepts. All these studies are made from the viewpoint that the drawing of the child depends on his present experiences and on the stage of mental development in relation to age.

9. Very few attempts have been made to diagnose personality as a whole from the drawings of children. T. Traube(575) found some relations between children's graphic movements and certain personality features. For instance, an inclination of vertical lines, which should be made at a right angle to the basic horizontal line, indicates, according to Traube, depression; preference for geometrical design and the absence of living beings in a drawing suggest a mental blocking. Traube collected graphic characteristics from bold and from timid children, demonstrating that timid children use only a small part of their paper for drawings. K. E. Appel,(31) asking children to draw a picture of the house in which they live, of their parents, siblings, etc., used drawings as a means of exploring the child's reactions toward his environment. Psychoanalytical interpreters use doodlings, scribblings, drawings, and paintings as stimuli for the patient's associations.

ART CRITERIA OF CHILD AND OF ADULT

Since the child's conception of the world differs completely from that of the adult, it follows that the child's expression of such a world conception, for instance his "art," also differs completely from the corresponding manifestation in the adult. What we call art has many manifestations in the child and in the adult, and for a comparison we have to narrow our definitions. We consider here only children's drawings, and although there are many types of adult and child artists we refer only to their most characteristic manifestations.

The majority of adults' drawings are copies of objects; it is the imitation of their characteristics that makes these objects recognizable to everyone. Children's art is to only a slight degree an imitation of objects; it is a representation of the child's conception of them. While the average adult's art emphasizes the impression, the child's art emphasizes the expression; while the adult's art usually refers to an outer realism, the child's art refers to an inner realism. The adult's art follows compositional rules of balance, which demand a certain selection of objects. The child does not have such a selective principle; any relationship is significant to him. While the average adult's art is determined by the principle of imitation, the child's art is determined by the principle of symbolization. In the adult's art there appears in general a direct relationship between content and expression, as in representing aggression by a war picture, whereas the child may use any object at all and express his aggression through the pattern of forms and strokes.

For the adult as well as for the child art consists of pictured associations. Certain elements between these associations are omitted, and the observer has to reconstruct them. The difference between the art of the adult and that of the child is caused by the different types of associations and by the different numbers of omitted links. To interpret art in general we have to have a frame of reference, which is different in different periods, different in different artists, and, as we should like to emphasize, it is different in the opposite structures of child and adult. If we see in a child's drawing a lack of proportions, it means only a lack of our proportional scheme. The adult emphasizes objective proportions; the child emphasizes affective proportions. If we see in a child's drawing a lack of spatial orientation, this means a lack of our spatial orientation. The adult's spatial orientation is conditioned by experience, the child's by his emotions. When the adult's art emphasizes a separation of elements, and the child's art a mixture of elements, the adult's representation depends on his attempt to control objects by bringing order into them. The child's representation depends on his attempt to perceive a unity in the disconnected items. Hence, the child's aesthetics cannot be measured in terms of the adult's aesthetics, just as an African work of art cannot be evaluated in terms of the Greek style.

The negative attitude of adults toward children's drawings originates either in their lack of understanding or, more frequently, in their emotional protest against a form of expression which does not fit into their world conception. The present author objects to most of the usual interpretations of children's art. It is said that the child's art is imitation. The foregoing observations lead us to conclude that the child's art is not imitation but personal projection. It is said that the child's art does not show traces of personal expression. Just the opposite seems to be true, namely, that the child's art consists only of personal expression. It is said that the child's art represents alogical mental pictures. If the child leaves out certain parts which seem not to be important to him, as for instance the trunk in a human figure, he does from his viewpoint the same as the artist does if he leaves out some unimportant detail. Hence, from his aspect the child acts completely logically. No interpretations and conclusions made from surface appearances are justified, since art, as an expression of the total personality, only gets its significance from relationships. Even if the art expressions of children, mentally diseased, and primitive people show certain similarities, each of them has its own relationships and therefore differs in its structure from the other. Measuring of intelligence from children's drawings should be related to the child's associations to the drawn elements. What may be decomposition in a drawing by an adult may represent a synthetic conception of relationships in the drawing of a child.

Generally speaking, the following art criteria differ basically in adult and in child. The adult is guided by his impressions—the child by his expressions; the adult by imitation—the child by symbolization; the adult by selection—the child by a search for relationships; the adult by intellectual principles—the child by emotional principles; the adult by objective standards—the child by subjective standards. Hence, as is the case with the other manifestations of the child, there is no bridge between the art of the adult and that of the child since both have their own criteria and their own values.

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Attitude to space

72, 104, 170, 209, 439, 500, 538, 603.

Representation of objects in different age groups

42, 131, 319, 322, 327, 380, 386, 407, 454, 512.

Cultural influences in drawings

19, 20, 147, 152, 164, 210, 343, 344, 347, 391, 454, 481, 497, 508, 585.

Drawings of abnormal children

66, 277, 278, 400, 409, 495, 532.

Drawing ability

88, 105, 129, 138, 184, 229, 240, 293, 326, 568, 607.

Measurement of intelligence by drawings

224, 391, 408, 413, 472, 605, 607, 623.

Development of personality in drawings

90, 116, 163, 173, 273, 275, 345, 381, 388, 421, 477, 509, 510, 534.

Diagnosis of personality from drawings

2, 31, 258, 274, 350, 352, 375, 410, 419, 436, 575, 614.

Chapter X

CHILD AND ADULT
THE EDUCATIONAL BRIDGE BETWEEN TWO WORLDS

Four Misconceptions About the Child's Personality

Our emphasis on the two worlds of child and adult and the tremendous gap between them has a fundamental educational implication, namely that we must find methods with which we can build an educational bridge. According to our thesis the greatest difficulty in the educational situation lies in the misconception that the young child and the adult live on the same plane, share the same conception of the world, and have the same principles of self-expression. This misconception has led to four basic approaches to the child which establish the foundation for a child's emotional disturbance and, later, the adult's neurosis.

1. The child as a dwarf: If child and adult had basically the same mental, emotional, and social structures, the child would in all three respects be defective. From such a viewpoint the child, as an undeveloped adult, has continuously to be corrected. The adult puts demands upon the child which the child cannot fulfill, therefore reacting with feelings of inferiority and discouragement.

2. The child as a marionette: If the child is considered as an adult's raw material, which must be molded according to adult standards, the adult projects upon the child his model according to which the child should be patterned. The child, deprived of his individuality, is not considered as "being" but only as "becoming." He is expected to follow not his own law of development but the pattern of his parents' expectations, which mostly consist of their own unfulfilled desires; the child becomes a compensation for his

parents' failures in their lives. The child has to play a prearranged role, thereby losing vitality, spontaneity, and originality.

3. The child as a savage: If the child is considered as an adult's mirror image, he necessarily appears as a savage with his untamed emotions, his mental absurdities, and his social maladjustments. No mutual understanding can develop if the child's structural needs are neglected, ridiculed, or suppressed. The child becomes a stranger in adult society, thus growing into isolation, introversion, or rebellion.

4. The child as an idol: If the child is considered as the perfect "idea" of an adult, if an idol is made out of the child's supposed innocence and purity, he is pushed into a world of unreality. Overprotection and adoration deprive the child of his energies, inhibit the crystallization of the self, which emerges from the dynamics of struggle. The integration into adult society is delayed; the child becomes helpless and dependent.

The right of individuality is not granted to the child if he is considered from adult standards. The adult puts demands upon the child, but the child is not allowed to put demands upon the adult. He has not to demand but to receive.

But if the child is allowed a structure of his own, if he is a member of his own culture, the relationship between child and adult changes completely. Like a native of a mysterious civilization, the child has treasures of his own culture, worthy of exploration. The child is not only a receiver but also a giver; the adult may learn from the child.

ILLUSION OF THE "HAPPY CHILDHOOD"

The misconceptions of the personality of the child are usually accompanied by certain illusions which many parents have about children. Such an illusion is the belief that the young child has no feeling for serious or sad situations but lives always happily in a fairy tale world. It is forgotten that the fairy tale world is not only full of marvels but is also full of fears. The child is thought to be happy because he does not worry about most of the things which make life difficult for the adult. It is forgotten that the young child, more sensitive in body and soul than the adult, suffers from little things which a grownup would disregard. Pain which would mean little to the adult can be terrible for the child; an injustice which the grownup would belittle can darken the life of the child. The difference of size between adult and child also plays an important role in the field of impressions and expressions. Even if we were to protect the young child from all experiences which an adult would consider as unhappy ones, we could not protect him from unhappiness within his sphere of living. Happiness and unhappiness in the life of the young child have probably a similar proportion to each other as they have in the life of the adult; at any rate, the belief in the "happy childhood" seems to be a wishful illusion of the educator. John Dollard et al.(165) remark:

> The conception that childhood is a happy period has considerable currency in American society. As a result many workers underestimate the emotional costs of socialization. . . . If babies could talk they would tell their own stories of frustration: the continual modifications of behavior expected from them, the arbitrary demands (from their point of view) made by adults, and the frequency with which established instrumental acts and goal-responses must be abandoned.*

Children suffer from things of which, in most cases, the adult has not the slightest idea. A child may react with nervous anxiety because he is afraid of the presence of somebody during his sleep, due to an adult's "kind" remark: "Sleep well, the angels stay at your bed." A little girl who looked different from her siblings, like "a little gypsy," developed the fear that she was not the child of her parents but was left by gypsies who might sometime come and take her away. One child, when he saw photographs of himself, had the fear of becoming as small as the pictures. Children with these fears often do not communicate them to adults, and if they do, the adult usually takes them as silly fantasies and disregards their effect upon the child.

UNDERESTIMATION AND OVERESTIMATION OF A CHILD'S PERCEPTION OF HIS ENVIRONMENT

Another illusion is based upon the underestimation or overestimation of a child's perception of his environment. The young child sometimes gets the worst room in an apartment, rationalized by a notion that the child has not yet developed an understanding for environmental conditions or an aesthetic sense. Actually, the child feels clearly the difference of attention given to rooms. Frequently —as was especially the case in Germany—the child's room is filled with furniture, such as chests for linen, a sewing machine, etc., which does not belong to the child, and members of the family, ignoring his presence, disturb his play. A child, however, is not only sensitive, but has a right to be sensitive in order to sharpen his reactions and his impressionability. An opposite reaction is to overstuff the child's room with toys or furniture. Some parents believe that toys, dolls, and furniture have to be the most expensive, thus rather demonstrating what they do for the child than their insight into the child's actual needs. Such parents do not understand that some piece of wood may be more valuable to the child than the most elaborate doll.

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* Pp. 56-57.

The greatest danger lies in the assumption that the young child has no understanding of emotional or sexual reactions which parents sometimes display before their children. R. M. Lindner(369) presents the autobiographical material of a psychopathic young man obtained in a hypnoanalysis. He succeeded in bringing the patient under hypnosis and having him remember his first impressions, which went back to the time when the child was lying in the cradle. The patient remembered every detail of having watched the parents' sexual intercourse:*

> When I was lying in the cradle . . . My father was on top of her. My mother looked at me and my father—looked at me. My mother's eyes were so pitiful and—soft. Then I looked at my father. His eyes were so hard, like bright lights. I saw the whites, the whites, looking right into my eyes, shining. I don't know whether I am afraid of his eyes or his penis more. They're mixed up. His eyes—his penis . . .

The tremendous impression which the observation of the sexual intercourse had made upon the child was due to its provocation of fear in the child, who believed that the father had assaulted and hurt the mother. The child, fearing a similar assault, developed symptoms of continuous fright, an emotional disturbance, and finally a neurosis. One of the neurotic symptoms of the patient was a hysterical disturbance of vision which improved after the early remembrance and after the analysis had established the relationship of associations: penis—eyes—sex—fright.

We shall not go into a discussion of the probability of whether many persons, if they were under hypoanalysis, could remember occurrences from their first year of life; but at any rate, preschool children frequently are subjected to a traumatic experience through the emotional behavior of their parents. We present in this connection two drawings by a girl, obtained through the courtesy of Dr. Fiedler, child psychologist at Vassar College. The chronological age of the child was 8.7, her mental age 8.0, I.Q. 93. In the third grade she began to be flighty in school, did poor work, cried easily, had nightmares. She had consistent dreams of bees and snakes crawling over her and into her mouth. She saw a man who made strange faces. "Oh, it's all funny," she exclaimed and made grimaces when talking to the observer. Suddenly she cried, "But it isn't true, it isn't true!" When asked to draw her dreams, she started drawing a bed with herself sleeping in it, and over her body was crawling something which she described as a bee. Over the bed she drew giant bees which had come through the window (Fig. 117). The child was highly disturbed, and the observer asked her to go on with the drawing. Now she drew herself in bed, and a man on top of her, his head having a form similar to that of the bee (Fig. 118). After this drawing of a sexual act the child felt relieved.

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* Pp. 216 ff.

Our examples serve to illustrate the danger of the misconception that the child is not able to sense and to interpret emotional happenings around him.

ILLUSIONS OF PARENTS ABOUT THEIR ROLE

Many parents believe that education is a gift to the child, for which he should be grateful. Many fathers exclaim, "How much I have done for you!", and many mothers, "How much I have suffered for you!" They forget that the child did not ask to be put into this world and that it is now his right to be educated. Many fathers see in their child only a future successor in their profession, a fulfiller of their wishes and ideals; many mothers project upon the child their own unsatisfied emotions. Their illusion is that all their actions serve to benefit the child, instead of recognizing that they only serve their own benefit, neglecting the child's individuality. Many parents' good intentions can be unmasked as rationalizations for their own unsolved problems. They may consciously repeat the mistakes to which they themselves were subjected in their education, because they are fixed by tradition. On the other hand, they may consciously strive, out of resentment, to do just the opposite to what they experienced, whether or not it is good for the child or youth. Much more dangerous, however, are unconscious trends which stimulate educators to act against rational considerations. Psychoanalysis has shown how much we depend on our drives and how many ideals and moral standards often do not derive from an insight, but are masks or compensations of drives and repressions. Therefore the educator should have an intellectual insight into his goals; he should analyze whether these goals are conceived in view

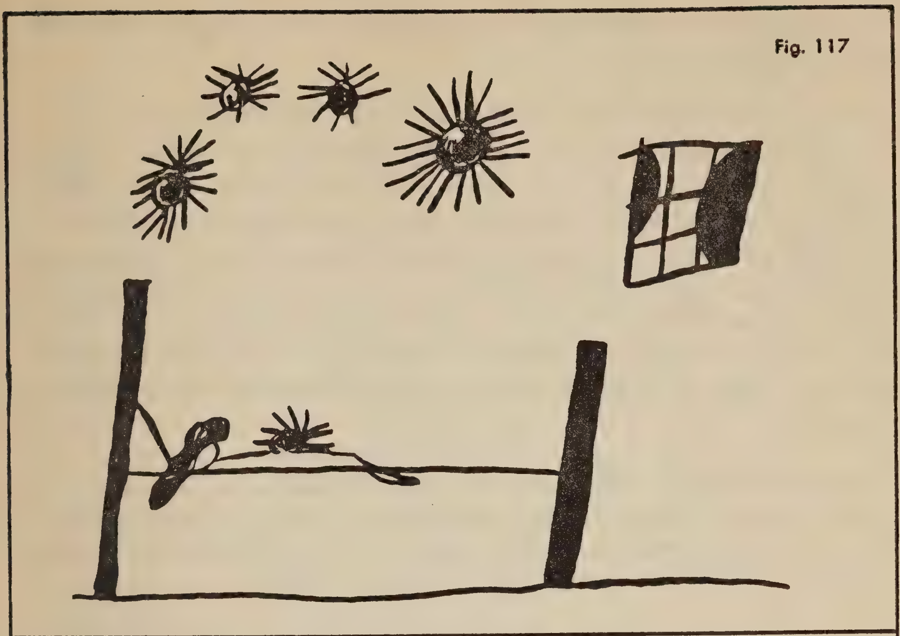

Fig. 117

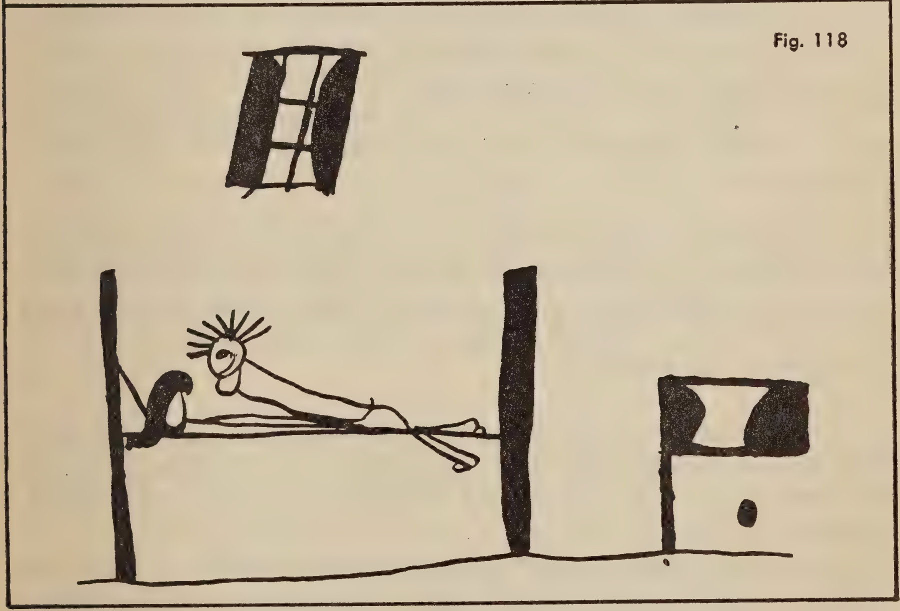

Fig. 118

FIGS. 117-118. SEXUAL FANTASY OF A CHILD of the person to be educated, or only in view of solving his own, the educator's, problems.

ILLUSION ABOUT THE VALUE OF PUNISHMENT

Another basic illusion is that the child has an innate understanding of the rules of the society in which he lives. If the adult, punishing a child for an offense or lapse, feels that he is right and the child is wrong, he forgets that all these rules are made by human beings and are learned by experience, and that these rules must seem as strange to the young child as do the rules of savages to civilized man. Authoritarian psychology is based upon the wishful illusion that the adult is the possessor of objective truth. W. Stern remarks:(539)

> Childish wilfulness and defiance has to be overcome, not only because, as a rule, the adult's wish is the wiser, and therefore essential in the child's own interest, but also because he must be trained in self-control and submission to authority. So that here, too, punishment is unavoidable.*

Stern, however, is conscious of the fact that one difficulty in the punishment of the child's offenses lies in the adult's interpretation of them, because the adult judges the child's behavior from his own moral standpoint; for instance, what he may call a lie appears to the child as truth, conceived in his imagination. Stern(539) also points to the fact †

> that self-will and rebellion are but the reverse side of that valuable quality in a child of a desire for independence, and since education does not aim at obedience as an end in itself, but only as a preparation for and condition of higher ends, care should be taken when attempting to conquer self-will not to crush the child's strength of character.

Discussions about the value of punishment are very old. The Biblical viewpoint,‡ "He that spareth his rod hateth his son; But he that loveth him chasteneth him betimes," still governs many parents.

There are different motives for imposing punishment. One is that of retaliation, the idea that a bad action necessarily has a disagreeable consequence. Here punishment is to serve as an instrument for building up moral values. Another motive for punishment is to make it serve as a painful association in memory. Here punishment serves only as an indication that the child must not forget to do or to avoid a certain thing. Still another goal of punishment is the acceptance of authority. And still another motive for imposing punishment follows the Greek verse (Goethe's *Wilhelm Meister*): "Man not tormented is not educated."

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* P. 556.
† P. 556
‡ Proverbs 13, 24

All these motives for punishment are "objective" ones. However, in many cases such objective motives are only rationalizations of subjective factors, such as an adult's will for power, sadism, resentment, retaliation, experiences from his own childhood, etc. Not only observations of children's behavior but also the means and aims of education must be analyzed; they cannot be considered by their mere appearance. Generalizations in child study are difficult and dangerous. It is certainly desirable to limit punishment to the minimum, to respect the child's own world, and to give him opportunities for self-expression. However, when certain actions bring the child's life in danger, one has to apply punishment as a preventing force. In any case, means of education have to be applied in an individual way. Forms of punishment have to vary according to the psychic conditions of each child and according to the situation demanding punishment. The following remark of Stern's(539) suggests the need to discuss the relationship between punishment and the object of punishment:*

> The child must not suck his finger, make ugly faces, dirty a room just cleaned, not take as toys, throw down or pull to pieces articles of value, such as watches and glass ornaments, etc., nor must he walk on the grass or lean out of a window. And since a simple "no" however often repeated, is sometimes not sufficient to outweigh childish forgetfulness and susceptibility to every passing desire, a stronger preventive measure in the form of some painful association must be taken.

This passage demonstrates the danger of generalization in child study. First, the different items, such as "suck his finger, make ugly faces, dirty a room just cleaned . . . , lean out of a window," if they demand punishment at all, are as different as stealing an apple and killing a man. Punishing all items equally hampers the process of differentiation in the child, which is the very basis for the crystallization of his self. The generalization of different prohibitions seems to be as anti-educational as is the generalization of one undesirable action under different circumstances. Sucking the finger and making ugly faces may simply be bad habits, but they may also be neurotic symptoms of emotional disturbances, indicating a psychic tension in the child, the explanation of which is much more important than suppression of a symptom which would be replaced by another one. Dirtying a room just cleaned might in the eyes of the child mean: making beautiful a room just left expressionless. Here again explanation, not punishment, should be the guiding principle. Punishment may be justified if a child cannot be made conscious of dangers otherwise, and if an overaggressive child maltreats other children who defend themselves insufficiently.

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* P. 555.

THE CASE OF JEAN JACQUES ROUSSEAU AND HIS PRODUCTIVE NEUROSIS

As an example of how a basic educational means, that of punishment, may have an effect opposite to that desired by the adult, we refer to the case of Jean Jacques Rousseau. Jean Jacques Rousseau, the great revolutionary of education, experienced in his own life the danger of punishment. The sensations which he experienced as a child in the act of being punished perverted his sexuality. Furthermore, feeling the injustice of being punished, Rousseau as a youngster committed evil acts, so that the punishment, expected anyway, would be just. He escaped into a world of imagination in which justice reigned, becoming alienated from reality. Excessive fantasy and lies, closely interrelated with each other, may result as forms of emotional maladjustment from the fear of punishment.

Rousseau reports how punishment was the most important impression of his childhood. The act of beating, administered by his governess, taking the place of his mother, who had died at his birth, was for him the first determining sexual excitement. He says:(494) *

> As Miss Lambercier felt a mother's affection, she sometimes exerted a mother's authority, even to inflicting on us, when we deserved it, the punishment of infants.—She had often threatened it, and this threat of a treatment entirely new, appeared to me extremely dreadful; but I found the reality much less terrible than the idea, and what is still more unaccountable, this punishment increased my affection for the person who had inflicted it.—All this affection, aided by my natural mildness, was scarcely sufficient to prevent my seeking, by fresh offences, a return of the same chastisement; for a degree of sensuality had mingled with the smart and shame, which left more desire than fear of a repetition. I was well convinced the same discipline from her brother would have produced a quite contrary effect.

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* Our quotations refer to the complete manuscript of Geneva, 1759, quoting mostly from the translation by E. Hedouin.

> Who would believe this childish discipline received at eight years old, from the hand of a woman thirty, should influence my propensities, my desires, my passion, for the rest of my life, and in quite a contrary sense from what might naturally have been expected? The very incident that inflamed my senses, gave my desires such an extraordinary turn, that, confined to what I had already experienced, I sought no further and, with blood boiling with sensuality almost from my birth, preserved my purity beyond the age, when the coldest constitutions lose their insensibility; long tormented, without knowing by what, I gazed on every handsome woman with delight; imagination incessantly brought their charms to my remembrance, only to transform them into so many Miss Lamberciers.

Rousseau informs us further that later not only the act of beating but exposure of the beaten part of the body was highly exciting:

> My excitation was growing so much, that not able to satisfy my impulses, I stimulated them with the most strange manoeuvres. I visited dark avenues, isolated places where I could show myself to female persons from some distance under conditions under which I would have desired to be with them.—The silly pleasure which I felt in exhibiting myself before their eyes is beyond any description.

Besides the emotional satisfaction which Rousseau got from the act of being beaten, he also reports that, as to a moral value, punishment had just the opposite effect. In his childhood Rousseau was not only beaten by Miss Lambercier. He also was punished by his master in the workshop. He tells us:

> A continual repetition of ill treatment rendered me callous. It appeared as a kind of set off against my crimes, and at the same time seemed to authorize me to continue them. Instead of looking back at the punishment, I looked forward to revenge. Being beaten like a slave, I thought I had the right to all the vices of one. I was convinced that to rob and to be punished were inseparable, and gave myself up to a kind of traffic, in which, if I performed my part of the bargain, my master would take care not to be behindhand with his. This preliminary settled, I applied myself to thieving with great tranquility, and whenever the thought of the consequences occurred to my mind, my reply was ready, "I know the worst, I shall be beaten; no matter, I was made for it."

Both experiences connected with punishment, that of joy and that of resentment, determined the child's attitude toward life, an attitude which Rousseau describes as follows:

> It is very singular that my imagination never rises so high as when my situation is least agreeable or cheerful. When everything smiles around me,

then I am least amused. . . . Were I confined to the Bastille, I could draw the most enchanting picture of liberty.

These examples demonstrate clearly the dynamics between educational aim and educational effect, between apparent behavior and underlying experiences. If we were to conclude from the case just cited that corporal punishment has to be excluded radically from education because it has the detrimental effect just demonstrated, such a conclusion would also be wrong in its one-sidedness. Not each child suffering a punishment experiences emotional satisfaction, and not each child experiencing emotional satisfaction in the act of punishment is determined by this experience in the development of his personality. The individual reaction and the fixation of this experience must be preceded by different conditions, so that the dominating response answers different stimuli. The death of Rousseau's mother at his birth was felt by Rousseau as his first punishment. After that time he himself had replaced the mother in relation to his father, taking over the role of a passive wife. His deep feeling of guilt was relieved during an act of punishment and thus brought satisfaction. His early experience of punishment determined Rousseau's fixation to his childhood; he reports: "I spent my youth in a happy darkness which I did not intend to leave."

Rousseau made his neurosis productive in his educational philosophy, but this is an exceptional case. Other persons might be blocked in their further development, and punishment as an educational aim toward maturation might have just the opposite effect, namely, that of frustration.

GENERAL AND INDIVIDUAL PATTERNS

The education of the young child is determined by a basic observation, namely, that the child's growth follows a rather definite general pattern. Every child, for instance, learns first to stand on his feet, then to walk; he first starts to babble and then to speak; he first scribbles and then draws. These general observations led to the attempt to standardize a child's functions and accomplishments. A child is supposed to show certain characteristics at 1 year of age, at 2, at 3, and so forth. The danger of the psychology of the "average child" lies in the neglect of the child's individuality. Although all children go through certain general stages of development, the individual deviations within the general pattern are as numerous as individual deviations are with adults. Children differ in their rate of development, and the terms commonly used in literature on child development, such as "mental age," "language age," "reading age," "dental age," "height age," etc., must be used very carefully. The general age factor can be used only as a frame of reference for a preliminary orientation. We must always remember that personality does not show isolated patterns but that each pattern has to be considered in relationship to other patterns, and all patterns of the child together have to be checked against his background. For instance, the pattern of the "mental age" may be related to certain handicaps. All the child's functions together depend on his background, on his socio-economic situation, on his cultural standards, on his hereditary endowment, and even on climatic factors. The average height and weight in colored children, for instance, differs from that of white children, and the physical growth differs in various climates. The child's functions depend on his family situation, on his opportunities to learn, on emotional factors such as his general happiness, unhappiness, and discouragement. The mental age may be "normal" but inhibited in its manifestation, and the manifestation may be covered by emotional disturbances. On the other hand, a high development in some respects, for instance, in language, is not necessarily correlated to a high mental development; it may be a special gift, a product of special training, a compensation for some defect. Neither a fast development nor a retardation of an isolated function allows us to classify the child's developmental age or to predict his future development. M. E. Breckenridge and E. L. Vincent (86) formulate this viewpoint, which is also our own, as follows:*

> Many people, in studying a child, simply examine him at the moment and compare the results with standards for his age. This, however, does not give us what we really want to know about him. We are, or should be, less concerned with where he *is* in his growth than about whether he is going in the right direction. The only way we can get a fairly accurate estimate of this is to get the *trend* of his own unique patterns of growth.

Child study teaches us here that personality cannot be considered as a summation of trends, but should be considered as an integrated pattern; and that it cannot be classified according to rigid standards but only judged according to dynamic directions. General reactions are only the frame for unique patterns. It is only from a long-range study that unique patterns may become visible.* The unique pattern, however, is not the sum of trends or functions at any minute, but results from their integration and their developmental direction. The unique pattern is the guiding principle in personality, that principle which stimulates or retards certain reactions and expressions in the child, which is the selective principle for the child's experiences, and which modifies his mental, social, and emotional development.

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* Pp. 23-24.

NATURE-NURTURE AND THE UNIQUE PATTERN

The concept of the child's unique pattern, or individuality, poses two problems which are most important for education, that is, to what extent individuality is shaped by heredity and to what extent by environment.

The influence of heredity becomes evident in extreme cases, in the feeble-minded and, sometimes, in the genius. The "combined effect of heredity and environment" has been shown in studies on foster children.(106, 523) In cases in which the I.Q. of the foster children, of their own parents, of their foster parents, and of the own children of the foster parents, was known, it was observed that the foster children's I.Q. changed through the influence of their home with the foster parents, but that significant differences appeared in comparison with the I.Q. of the foster parents' own children.(106, 107) A controversy about the effect of nursery school education upon the I.Q.(52, 311) led to the conclusion that both heredity and environment determine the child's intelligence. According to these studies, heredity seems to have the greater importance; the rates of development apparently are given by heredity but modified by environment. Certain basic traits of personality, such as the urge for cooperation, for competition, for aggression, and for affection, are already manifest at 1 year of age. However, the way in which they manifest themselves and the degree of their development largely depend on educational influences.

Such educational influences are established first by family attitudes. Parental relationships(247, 385) as well as the child's position in the family(8, 426, 483) are of main importance (see p. 52). Generally speaking, the attitude of the mother patterns the child's emotional reactions and, according to psychoanalysis, directs his sex development; the father patterns the child's ideals; the siblings provoke cooperation and competition. The feeling of security or insecurity is early implanted in the child by his environment. A stimulation to curiosity, or inhibitions which lead to the child's escape into a private world are basic experiences which may have either a positive or a negative effect. Curiosity, for instance, may produce a scientific spirit or restlessness, and the escape attitude may produce an artist or lead into neurosis. The direction of this development depends on the interrelationship of hereditary factors, on the interrelationship of environmental factors, and on the interrelationship of both.

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* Long-term research, observing children's development over periods of years, has been and is being carried out at several universities and colleges, including Antioch College, University of California, University of Illinois, University of Iowa, Merrill Palmer School, University of Michigan, Vassar College, Western Reserve University, and others.

But the formation of a trait or trend depends not only on the complex pattern of heredity, of environment, and the relationship of both, but also on three groups of factors, the biological, the mental, and the emotional ones. A child's biological or physiological handicaps, such as glandular deficiency, defective sense perception (seeing, hearing), defective means of expression (stuttering), and his general well-being, determine his mental development and his emotional adjustment. On the other hand, emotional disturbances, such as jealousy and fear, may have biological implications, affecting a child's physical well-being, for instance eating,(167) sleeping,(221) and bowel movements.(10) Psychoanalysis, and especially Alfred Adler's individual psychology, demonstrated this psychological-biological unity, now called "psychosomatics."

If the unique pattern of personality is thus formed by nature and nurture, it is continuously molded by innumerable relationships and it becomes evident that any diagnosis or prediction of personality focusing upon single trends remains fragmentary and has a highly limited validity.

Both basic phenomena, the child's unique personality pattern which modifies his general age pattern, and the enormous complexity of personality, already established in the young child, have important educational implications. The personality of an individual child can neither be measured nor be educated according to ready-made standards. The individual child demands an individual education. Age standards may be compared to cultural characteristics; just as all members of a certain Indian tribe have certain characteristics in common, out of which individual types emerge, so all children of a certain age group have their age characteristics in common, while at the same time they are unique individuals.

The complexity of personality which necessarily develops from the relationship of heredity and environment and the many biological and psychological constituents excludes the assumption of the child's simplicity. True, the child has fewer experiences and therefore fewer associations than the adult; his mental, emotional, and social patterns have a simpler structure than those of the adult. But on the other hand, the adult simplifies his complex patterns by the process of differentiation and separation. In the young child all reactions and expressions form a unity; patterns are not yet "classified" but are intricately interwoven with each other, thus forming one very complex structure. The "simplicity" of the child is a myth.

THE DEVELOPMENT OF THE SELF

In his early development, the child seems not to be able to differentiate between himself and his environment, as Breckenridge and Vincent remark:* "Tiny babies do not seem to know where their own bodies leave off and the crib or toy begins. We see them biting a toe and looking puzzled because it 'feels.' "

In the first stage of differentiation the child knows the limits of his proper being but he cannot make differentiations in his environment. Human beings, animals, objects, all are equally animated.

In the following stage of differentiation human beings are separated from the other surroundings, but up to 4 years the child assumes that they act and react as he does.(465)

If in the next stage the child recognizes that his parents act and react differently from himself, he identifies himself with them. Conflicts between this identification and his own needs lead to rebellion. The 4- or 5-year-old acts in emotional self-defense. From now on the child selects persons and features of persons in his environment; he starts to discriminate.

It is in school, when the child is confronted with so many individualities and desires opposite to his own, that the child recognizes his self. Failures and successes crystallize more and more the child's consciousness of his limits, but these limitations are confined to the social sphere.

With the growth of spiritual problems, the individual feels himself isolated in the world. The infinity above him and the abyss which the youth discovers in himself create a gap between individuals. Despair, depression, and the feeling of utter isolation prepare the final emergence of the self. After the violent shake of adolescence individuality is established, and the present is differentiated from the past. Now, at the final stage, the future can be visualized. When the individual goal takes shape, when the individual has selected his path leading him into the future, then he becomes able to live purposefully. His actions become motivated in many dimensions; he may go to college in order to prepare himself for a profession, in order to establish a home, in order . . . in order, etc. The regulation of every act according to this multidimensional principle, directed by ultimate goals, is now accomplished by the self.

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* Op. cit., p. 420.

In the beginning development of the preschool child, individual and world are one; the individual is submerged by his environment. In the middle development of adolescence, individual and world are split in two and become antagonistic. In the next development, that of manhood, the individual tries to impress himself upon the environment, and in the final stage individual and environment are reconciled.

THE CHANGE OF PERSONALITY

How much can education interfere with the development of the self? If delinquent parents have several children, some may become just as maladjusted, but some may develop opposite characteristics. On the other hand, educational experiments* indicate that maladjustments can effectively be changed by proper guidance. Since, however, maladjustments are not single traits but result from a total personality pattern, punishment or the treatment of single symptoms usually will not yield satisfactory results. Maladjustment, being a disturbance of the total personality in its biological, mental, emotional, and social make-up, must be dealt with by an analysis and reconfiguration of the total personality. Approaches in this direction seem to be promising.(369)

The development of the self may be disturbed, as already pointed out, by a neglect of the child's needs, owing to the home situation. In this case education of the parents or a change of environment may be sufficient to redirect the development of the self. The disturbance may be due to discouragement and inferiority feelings. Experiments by L. M. Jack(296) indicate that the inferiority reactions can be changed. Jack trained a group of submissive children, who were dominated by a group of dominant children, in three different things with which the dominant children were not familiar. The submissive children, now paired with the dominant ones, increased their ascendancy score decidedly and attempted to dominate the previously dominant group.

R. Updegraff and M. E. Keister(578) reported children's reactions to failure induced by experimental means. The children, discouraged by failure, were trained in tasks so graded in difficulty that the children became more and more successful, gradually gaining confidence and becoming more and more well adjusted. Encouragement and gain in self-confidence are, as A. Adler(6, 7) emphasized, basic factors in directing the development of the self.

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* Such experiments are carried out at the Institute for Juvenile Research in Chicago.

Emotional disturbances may arise if the child's needs are not satisfied. Buying a much desired object may sometimes be sufficient to establish a balance; frequently the child is disturbed because he does not get needed information (sex, birth, etc.) or because he cannot discharge a troubled conscience (lying, stealing, having observed sexual acts, etc.). A satisfaction of desires, a removal of repressions, the possibility of discharging emotions may be sufficient for a readjustment. On the other hand, certain frustrations will always be inevitable in the educational process.

The development of the self also may be misdirected if the child cannot properly use his energies. Frustrations easily provoke aggressive behavior,(165) and boredom may cause a lack of coordinating activities. Experiments in occupational therapy, such as the famous Russian experiment with wayward youth after the first World War,* indicate that destructive impulses can be used up in constructive activities. Sports and play, expression in art (painting, modeling, dancing) help to discharge and to direct energies which otherwise might become destructive in actions or compulsions. Change of environment, encouragement, removal of frustrations, and the use and direction of energies are the main approaches to readjusting disturbances in the development of the self.

AUTHORITARIAN AND PROGRESSIVE EDUCATION

Educational principles have found their most radical expressions in the opposite poles of authoritarian and progressive education. The philosophies of education will be discussed in a final paragraph; here we shall discuss the practical implications of both approaches.

Progressive education is characterized by an emphasis on the child's individuality and need of self-expression. Working programs are devised which appeal to the demands of children; emphasis is laid upon the development of individuality and also upon the integration of the individual into the group. The main concern of the educator is to establish in the child what we might call "the feeling of security of resources without and within." The feeling of security without is fostered if the child has the feeling of belonging to a group, if he feels wanted and loved. This implies an attitude of affection in the educator and his visible readiness to help the child.(191, 473) The progressive approach emphasizes the child's self-expression, corresponding to the psychological observation that frustrations and repressions may create emotional disturbances. The child is not only stimulated but urged to express himself. This urging has the danger of keeping the child constantly busy and in a continuous state of discharge which may inhibit the ripening process. Breckenridge and Vincent * emphasize, with Plant (473) and Frank,(190) the child's need of a ripening time, of introversion, withdrawal, escape. Introversion, which has a bad odor in American society, is necessary for the child who is on the search for his self. The child's feeling of security within is fostered if he has time to play by himself and to dream without being disturbed, ridiculed, or pushed into activities. According to C. G. Jung,(317) who introduced the concepts of introversion and extraversion, an extreme extravert should be balanced by leading him to introversion, an extreme introvert by stimulating him to extraversion. It is a dynamic balance that progressive education should aim at.

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* Cf. the movie, *The Road to Life,* by N. Ekk.

Authoritarian education emphasizes discipline and, through discipline, the repression of drives. This concept too has corroboration through clinical observations on the unity of psychic energies. Energies discharged in drives and emotions can be transformed or "sublimated" into mentally and culturally valuable activities. Emotional drives such as aggression should not merely find an outlet but should be transformed and redirected. Freud emphasized that cultural achievements are based upon repressions and even upon tensions and frustrations up to a mild degree of neurosis.(518)

Educators recognize the need of a discipline of emotions, of a guidance of drives in order to develop self-control. Conflicts should not be avoided at any price, since they make the personality of the child dynamic(502, 609) and adapt him to the principles of reality. On the other hand, conflicts which are not guided or integrated into the child's total personality are dangerous, as emphasized by most child psychologists.(91) The young child needs to a certain degree the concept and the presence of authority. The question of a child in a progressive school, "Do we have to do what we want to do?", indicates a serious problem: A child is not able to bear all responsibility for his actions alone. He needs support and guidance, and only through the feeling of authority is he able to develop guiding ideals.

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* Op. cit., pp. 103 ff.

The danger of authoritarian education is that it may crush the child's individuality, vitality, originality, spontaneity, and initiative. Obedience fostered by authoritarian education and responsibility stimulated by progressive education must be balanced. The political issues of our time have demonstrated the dangers of authoritarian education. On the other hand, however, the establishment of values demands that the child's experience of authority be not excluded from progressive education. Authoritarian education isolates the individual, while progressive education makes the individual into a social being. Though man is first of all a member of society and lives with and for society, he will shoulder his full part as a citizen of his time only if he has developed his individuality, which differentiates one from the other. The aim of education is not to lead but to help the individual, that he may become sure of his ego, balanced in his self, and finally, independent of the bondage of his individuality.

PHILOSOPHIES OF EDUCATION

Educational philosophies usually are concerned not with the preschool child but with the school child and college student. However, the basic attitude of the educator, formulated in terms of the relatively mature individual, is reflected in a similar way upon his approach to the young child. We shall discuss in the following some general viewpoints of education which, in only a lesser degree, are equally relevant for the education of the nursery school child.

The problems of education consist of four basic issues: the goals toward which we are educating; the means with which we are educating; the human material to which education is applied; and the values with which education is operating.

The goals in education have always been in the foreground, but they were always formulated vaguely. For Plato the goal was "to develop in the body and in the soul all the beauty and all the perfection of which human beings are capable." Neither beauty nor perfection is here defined. According to John Stuart Mill, education is everything "which helps to shape the human being." Since everything shapes, the goal of education again is clouded. The goal of education has two alternatives: Either it is work on the individual for the sake of the individual, or it is work on the individual for the sake of society.

The means of education are either the transmission of factual knowledge, accumulated by others and laid down in books, or the development of individuality and originality.

The educational concept depends on our view as to whether all human beings are basically equal, whether we believe in the determining influence of heredity, or whether we believe in the decisive patterning by environment. Some modern educators, like Mark Van Doren, believe that the basic nature of man never changes. Scientific findings disprove such belief. Defining the term "nature," it embraces at least physical features, intellect, and emotion. Physical features not only change in the development of man in different degrees, but also, as was shown by the anthropologist Franz Boas, by immigration to other countries. Intellectual features may be changed by the environment, as was demonstrated by studies on the I.Q. of foster children. And emotional characteristics may be changed, for instance, by psychological treatment. Basic differences of human nature appear in studies of physical reaction in different races.

The values in education are the most complicated problem. There is, for instance, the view that the most important thing to stress in education is mental training and discipline. The assumption is that the strength which one faculty acquires in a particular material would lead to the ability to deal with any other kind of material. Experiments in psychology have disproved this assumption. A person who is trained to learn poetry is not better able than before to remember prose.

Another value considered as basic in education is that of usefulness. However, the usefulness depends on the individual personality and on the demand of society at a particular time.

Classical education, emphasizing the concepts of past cultures, had just the opposite viewpoint, namely, that only practically useless knowledge is valuable.

For some educators, for instance, Bertrand Russell,(499) education should only be directed toward the intellect. He says:

> Education should have two objects: first, to give definite knowledge, reading and writing, language and mathematics, and so on; secondly, to create those mental habits which will enable people to acquire knowledge and form sound judgment for themselves. The first of these we may call information, the second, intelligence.

Here, education disregards the problems of society as well as the sphere of the emotions and the unconscious, which, according to modern psychological and sociological observations, may modify our intelligence.

William H. Kilpatrick(329) * states:

> It is our conviction that any educational philosophy, which is to be significant for American education at the present time, must be the expression of a social philosophy.

And he says furthermore:†

> The essential point of a social conception of education, however, is that these subjects be taught in and with definite reference to their social context and use. Taken out of their social bearing, they cease to have a social meaning, they become wholly technical and abstract.

The danger of a completely social determination of an individual's education appeared clearly in Fascism and in Communism.

A group of Catholic educators stress the need for religion in education. The concept of religion is even substituted for that of truth. According to Jacques Maritain,(393)‡ "Our crucial need and problem is to rediscover the natural faith of reason in truth." This truth is defined as follows:§ "Truth is an infinite realm—as infinite as being." And furthermore:|| "He [man] has spiritual super-existence through knowledge and love." With such a cloudy conception of truth, disregarding the existence of Kant, Maritain feels justified in disclaiming any value in science:¶

> In the field of education this pragmatic theory of knowledge, passing from philosophy to upbringing, can hardly produce in the youth anything but skepticism, equipped with the best techniques of mental training and the best scientific methods, which will be unnaturally used against the very grain of intelligence, so as to cause minds to distrust the very idea of truth and wisdom and to give up any hope of inner-dynamic unity.

Of all the theories mentioned above, we may say that each single statement may be justified, but there is the danger of being exclusive and of disregarding all the other aspirations of human nature. Man's organism is not a sum of single static elements but a dynamic relationship, referring to the whole; stressing a part, one easily loses the view of the whole.

From all the general theories we should like now to go into the

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* P. 35.
† P. 51.
‡ P. 114.
§ P. 12.
|| P. 8.
¶ P. 13.

details, in which values become manifest. From the numberless aspects we shall stress six basic ones.

1. Values and the concept of space.

Authoritarian education, with its idea of uniformity and discipline, narrows extremely the space in which the individual can move in liberty. Progressive education widens this space considerably, giving the individual all possibilities for movement. The limiting approach helps to develop concentration and a sense of direction. The progressive approach tries to open continuously new possibilities.

2. Values and the concept of time.

Classical education stresses an understanding of the past, while progressive education stresses an understanding of the present; but not enough approaches are made which we could call education for the future.

3. Values and the concept of society.

Originally, education had the tendency to subordinate the individual completely to the community. This tendency was checked by Christianity, which increasingly valued the individual. Some modern educators also believe that the individual is determined by and has to adapt himself to society, while others hold the opposite view that the individual should differentiate himself from the environment in order to bring out his originality.

4. Values and the concept of the organism.

Education depends on the educator's concept of the organism, whether he takes the Greek view, "a healthy mind in a healthy body," which stresses the need of a physical education balanced with a mental one; or whether he takes the Christian view that the mind is master over the body, and that we can neglect the physical needs; or whether he takes the psychoanalytic view that our emotions, drives, and unconscious aspirations determine our mind as well as our body, thus demanding an education of the unconscious. According to another view, education must appeal to the soul. This is a rather undefined concept, related to religious ideas, as it appears, for instance, in Maritain, who says:* "I feel little trust in the educational efficacy of any merely rational moral teaching abstractly detached from its religious environment." This is an education of the latent metaphysical needs of the individual. Another view is that education should especially appeal to the creative forces of the organism, as they appear, for instance, in art expression, play activities, and free imagination. There is, finally, the viewpoint that education should appeal to the activity of the organism. This would be education for efficiency in a profession, or toward social activities, or for leadership.

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* Op. cit., p. 68.

5. Values and the concept of reaction.

Education may be dominated by a static concept, emphasizing the static accumulation of knowledge; it may demand a uniformity of reaction, stressing discipline and the separation of the different manifestations of the organism. The ideals of static education are the concepts of order, subordination, and security, to be gained by creating strong limitations. The opposite view is dynamic education, emphasizing spontaneity, originality, and adventure. Here the individual is encouraged to act, to break limits, to go forward. Concerning the individual's reaction, there are two other possibilities for education not practiced in the Western hemisphere. One is education toward introversion. It is education toward meditation and withdrawal from the outward world, as practiced in India and China. It is education to suppress all emotions, as it is practiced, for instance, in Bali, where even small children are trained not to cry, not to express fear, and not even to express happiness. And there is another type of education that works by introducing tensions to the organism. Many ceremonies and initiations in primitive societies create a kind of artificial neurosis. These tensions are used to provoke strange reactions which are supposed to stimulate metaphysical feelings and to create an emotional bond with the society.

DYNAMIC EDUCATION

The idea that dynamics are a productive element in education appeared as early as with the Greek Heraklitus, who emphasized that everything originates in opposites, and that struggle is the father of all things. No attempts were made to elaborate this view in detail. A study of man's personality, however, reveals its essentially dynamic nature. One-sidedness leads to rigidity and automatism. Two-sidedness leads on one hand to creative subjectivity, and on the other hand to scientific objectivity. Natural trends in the structure of personality are trends toward development, change, and conflict. Since they involve insecurity and danger, they are compensated by a drive toward confinement, immobility, up to rigidity. Compensations such as the suppression of natural drives are often a neurotic symptom, namely, that the apparent behavior is untrue, that the real nature is suppressed, and that all energies have to be used for such suppression. Education should not always support this suppression but should develop strength in the individual to cope with his conflicts.

How can this be done? The educator should never show one way alone but should suggest all the possibilities which are given. He should develop courage in the child to make choices, and these choices should become more and more difficult until the child develops so much security within himself that he is not lost in dangerous situations. The child should develop opposites in thinking and reacting, leading to the development of the most different aspects, of which we shall cite a few: realism and imagination, skepticism and enthusiasm, tension and relaxation, strength and sensitiveness, subjectivity and objectivity, spontaneity and premeditation, introversion and extroversion, exclusiveness and conformity, isolation and cooperation.

This education in accepting the antonyms of life not only would lead toward an understanding; it also would lead to activity and stimulate the drive to obtain a synthesis. It would lead basically to what we call "interest." The word "interest," from the Latin *inter-esse,* meaning "to be between," seems to indicate that an affective participation occurs only if we are confronted with at least two possibilities, of which we must make a choice. Only if an object offers several possibilities, between which we hesitate, does it become a problem, stimulate our participation, and evoke "interest." This dynamic interest, then, leads us to struggle until we solve the problem, until we unite the different possibilities, or select one. With such a personal act the meaning of the object becomes integrated into our mind.

Hence, a dynamic education which I am proposing, an education of mind, soul, and body, is a dialectic method for the mind, an emotional method to make the unconscious productive, and a coordination method to make the body elastic and flexible. The basic goal of the dynamic method is to develop the highest sense of relationships. It is a training in acting and reacting with one's entire personality, a training for search, which involves mental alertness and imagination, a training for enthusiasm, that is, for affective participation. The viewpoint of dynamic education excludes all one-sided approaches, as enumerated above. It excludes the assumption that education can follow a "cook book method," believing that it must change according to the individual and his needs. Dynamic education is a fusion between the meaning of the word "education," from the Latin *educere,* that is, "to lead forth," and of the word "instruction," from the Latin *instruere,* that is, "to join together, to pile up." Dynamic education is not based upon any assumption of rigid, absolute values; it should guide to an authority within and to a freedom without.

Dynamic education for the preschool child emphasizes the principle of flexibility. The child must realize that he has to cope with certain basic demands but that these demands may change under certain conditions and that they may be different for different persons. The child experiences that he is not allowed to do what his little friend does and that the grownups have some standards different from those that young children have. The adult should realize that education is a dynamic process of life. Some parents, guided by the ideal of objectivity in their relationship to their child, do not dare to show any emotions; they do not kiss the child and they do not beat him. They develop a behavior like the centipede in a fable, who, observing which foot he used first, could not move at all. A child needs affection and will provoke punishment rather than endure a rigid and cool attitude in his parents. Bernard Shaw remarked: "Never strike a child except in anger." Education should be natural and not follow rigid rules; its basic principle should be insight into the dynamic differences of life. Recognizing the gap between the world of child and that of adult, the adult should not punish the child for expressing his needs but should guide the expression of his needs into channels which gradually lead to the child's adjustment to adult society. Aggression can be transformed into competition, and competition into mutual assistance. Balance is the ultimate goal of dynamics; if a child is frustrated in expressing one need he produces another one. Emotional disturbances usually are the child's compensations for a neglect of his needs. Dynamic education is the awareness of balance and unbalance in the child's relationship to his environment and to himself.

"EDITING THE MATERIAL" OF THE CHILD'S PERSONALITY

Our present study emphasizes the difference between the two worlds of child and adult in order to warn against the transfer to child psychology of categories which come from adult psychology. We follow K. Koffka's postulate:(340) *

> We must try to put ourselves in the place of the child with the same tasks before us which the child is expected to solve and with only those means at our disposal which are available to the child.

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* P. 31.

A recognition of the dynamic difference between the two worlds of child and adult throws a new light upon adult psychology, just as the psychology of the normal mind has been greatly advanced through the psychology of the abnormal mind.

Our present study emphasizes furthermore the importance of an experimental depth psychology. As J. E. Anderson(26) remarks:*

> The fact remains that the great body of investigations in the child field at the present time are behavioristic in their approach.

A mere collection of behavioral data and even their statistical evaluation does not help us in an understanding of the child's personality. On the other hand, without the extensive laboratory work of behavioristic approaches most of the data we have now would not have been known. Yet, it seems to the present author that the "archaeologists" in child psychology have already brought so many treasures from this unknown continent, that we should start to relate them and to interpret them in order to make that knowledge living, so that a bridge of understanding may link up the two worlds.

Our present study emphasizes not only the unification of approaches in studying the child, but also the concept of the unity of the child's personality. The thought of the child, too, is not an isolated phenomenon; when the child thinks or tells his fantasies he accompanies them with gestures or with vivid facial expressions which stand for the grammatical or logical differentiation of his thought. From a simple recording of the child's sentences we do not understand the content, because links of associations represented by gestures or mimicry are missing. Just as it is told that primitive peoples have not recognized their own recorded stories because the gestures were omitted, so it is with the child: thought and expression cannot be separated. The child's thought is expression. We do not understand a child's thinking if we do not consider it as a part of a whole; hence, any isolated approach will necessarily give wrong results.

Our basic educational tenet is that parents and teachers, trying to develop an individual's personality, should free themselves of delusions and illusions, from projections of their own conscious drives, and from expectations which derive from their own unsolved problems. A kind of self-analysis should precede each educational effort, and the institutions which educate teachers should at least put the same emphasis on the education of the future teacher's personality as on the training of his factual knowledge.

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*P. 7.

The emotional resistance to recognizing the difference between child and adult as two different worlds seems to have its root in the adult's unconscious attitude toward his own childhood. Everyone may reconcile opposite viewpoints, but nobody can live in two worlds. In order to live in the adult world the adult has to suppress the remembrance of the child's world which is buried deeply in his unconscious. Experiments in hypnosis indicate that patterns of this forgotten world can be brought to light; psychoanalysis has discovered the resistance against such conjuration of ghosts of the past; and the revival of childish attitudes and patterns of thinking in mental disease gives an indication that the burial of the child's world in us is a self-protection of the organism. Every child is forced to accept the adult pattern, and whatever we do, the child grows and becomes an adult. But the question is whether an inner adjustment corresponds to the outer one. We do not follow the doctrine that the child is completely conditioned by environment; neither do we believe that the child is exclusively a product of his heredity. We define the child in development by Goethe's words as "a stamped form, developing itself in living." In other words, a personality nucleus is supposedly inborn, but life directs the development of this nucleus, stimulating certain parts, suppressing others. The educator with this viewpoint must first become very familiar with the nucleus of the child's personality. If the child shows extreme motor activities, it will go against the child's nucleus always to keep him quiet. But, on the other hand, the motor activities of the child can be directed; they can be realized in sports, emphasizing the child's feeling of his own body; they can be realized in games, emphasizing the child's social relationships; they can be realized in the child's creative activities. The educator has the task of bringing into accord dispositions and aims, the "what" and the "for what." The "what" of the child's dispositions has to be explored carefully, observing his thought and his expression. The "for what" should be a mixture of the educator's ideals and the child's possibilities. If the educator is forced to exclude completely his own personality, he will become an uninspired mechanism; if the child's possibilities are disregarded, the child will be treated like an inanimate object. We thus define the aim of education as "editing the material" of the child's personality.

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Environmental influences

33, 107, 217, 270, 341, 365, 431, 473, 506, 523, 524.

Heredity

41, 106, 142, 375, 411, 456, 570, 618.

Development of the self

141, 215, 219, 282, 468, 488, 544.

Education

9, 132, 189, 191, 192, 246, 264, 271, 278, 309, 329, 359, 374, 376, 393, 412, 430, 432, 443, 475, 499, 502, 522, 529, 550, 562, 569, 572, 577, 578, 616.

Chapter XI

METHODS IN CHILD PSYCHOLOGY

The Mother and the Scientist

The structure of the mature individual has grown out of the foundations laid in childhood. The early experiences direct the development of personality and remain a source of stimulation and inhibition in later life. In order to understand the personality of the adult we must understand the personality of the child. The reversal of this statement—in order to understand the personality of the child we have to understand the personality of the adult—led to the greatest misconceptions about the structure of the child and about methods of education. Adults tried to understand the child's personality by means of self-examination. However, experiences, associations, and means of expression are fundamentally different in childhood and adulthood.

Another danger consists in relying upon one's own childhood remembrances. Our remembrance of the past is determined by our experiences in the present and by our expectations of, or wishes for, the future. Quick to forgive his own faults, the adult constructs an ideal image of his own childhood. Furthermore, what is remembered as a childhood occurrence frequently is a later invention based upon daydreams and wishes or influenced by stories told to the child. Adulthood as a frame of reference for childhood is not reliable; and neither are adults' observations of children's behavior reliable unless they are carried out under scientific conditions.

For many years biographies of children have been used as data for a child psychology.(477, 509, 510, 519) The most common source of error in this method is the uncontrolled observation. The lay observer fails to control the causes of behavior and is in danger of making a faulty interpretation.

Home observations frequently are based on too few data or on a selective principle of the observer who records the unusual behavior and excludes the average. Usually, observations are not recorded immediately at the time of the child's reaction but some time later and are therefore distorted through the defects of memory and through assumptions based upon wishes, so that the record may show what should have happened rather than what actually happened. Home observations frequently reveal the personality of the recording mother and of her identification with the child and not the personality of the child observed.

But the methods of child psychologists also are liable to criticism. Although the mother's approach is usually too subjective, the scientist, not having the intimate knowledge of a child which a mother has, frequently only studies the child's surface behavior. With the ideal of objectivity the scientist is in the danger of using general standards, inappropriate for an individual child.

G. S. Hall (255) introduced the questionnaire method in child study. But the scientist, eager to recognize general patterns of behavior common to all children at a certain age, may neglect the child's individuality. The concept of the child's individuality, taken into consideration by the mother's intuitive knowledge, should not be neglected but should be validated by critical analysis.(215) Fact and interpretation are both important but have to be dealt with separately. A mother's observation and the observation made by the scientist are converging approaches to the personality of the child.(340)

THE POSTULATE OF CONVERGING METHODS IN CHILD PSYCHOLOGY

Everyone is born with a unique heredity into a unique environment and therefore emerges as a unique individual. All approaches to the preschool child must have in view the understanding of the child as an individual.

Although individuality is a unique pattern, emerging from the fusion of heredity and environment, its framework shows general characteristics which are established by the conditions under which the pattern is formed. These conditions are similar for all children at each age level. A child at 1 year of age, with his limitations of movement, speech, and thought, has a characteristic framework given by these limitations; and the young child in general, with his limitation of experiences, has a characteristic framework which is different from that of an adult. The framework is different in different classes and in different family compositions. An objective approach to the child is thus offered by investigating the framework of personality at different age levels,(214) in different environments,(39, 106, 217, 270) and by comparing its general characteristics with those of adulthood.(172) These are the fields of *developmental approaches* and *comparative approaches*. The knowledge of these general and common factors then allows us to investigate how the child with his individual pattern adjusts himself to the framework. The adjustment of one individual can only be understood if we explore the adjustment of other individuals. The differentiation of one individual from other individuals under similar conditions is investigated by a *differential approach.*(315) However, the causes of an individual behavior, the forces which establish the unique pattern, can be explored only by an individual analysis which penetrates to the depth of the foundation of individual manifestation. It is ultimately the *depth approach* which leads us to an understanding of the child as an individual.

All these various approaches must be checked and balanced against each other, if an objective and at the same time full understanding of the child is to be attained. Each approach, isolated, brought great misconceptions into child psychology. The developmental approach alone led to an abuse of the concept of age standards. The concepts of mental age, reading age, speech age, etc., atomized the total structure of the child, making him a composite of developmental standards. The problem of the child's personality was substituted by the problem of a child's achievements measured by a legion of tests through which the concept of the child's total personality disappeared.(288, 552, 602, 619) The comparative approach, when used exclusively, led to the danger of comparing behavior of child and adult, and even of child and animal,(324) according to manifestations which showed similarities on the surface but which were structurally utterly different from each other. Similar behavior in child and adult may express maturity in the child, inadequacy in the adult, an abnormal response in the child, a neurosis in the adult. The differential approach, when used exclusively, led to a neglect of developmental factors, and the exclusive depth approach to a use of uncritical speculation. Hence, a future child psychology should be based upon converging methods in which the observations and findings of one approach are validated by another approach.

METHODS OF RESEARCH IN CHILD STUDY

E. Claparède,(132) one of the Swiss leaders in child psychology, lists five methods of research, focusing upon (1) the kind of phenomena collected, (2) the general conditions of investigation, (3) the collection of facts, (4) the nature of the subject investigated, (5) the means of investigation employed. Although Claparède emphasizes that laboratory experiments are the most exact, it is our belief that they inhibit the child's natural responses. The most fruitful method of observing the child is in his daily surroundings, where he will not feel that he is the object of investigation. The invention of the one-way-vision screen, which allows the observer to see the child but not the child to see the observer, allows us to study children's behavior without any interference. Systematic observation has been more and more emphasized.(26, 231, 566)

The questioning method, which, as shown by Piaget,(462-468) reveals fundamental patterns of children's thinking, does not take account of the danger of introducing concepts which are not in the sphere of the child's thinking; for instance, one of Piaget's questions was, "Why are stones round?" (465) * The collection of material preferably should not follow a pattern set by the examiner but should be based upon records of children's spontaneous manifestations. If such manifestations show certain definite patterns, a questioning method may be developed from them, thus using as a frame of reference the structure of the child himself and not the structure of the adult.

W. Stern,(539) one of the German leaders in child psychology, emphasizes three principles of investigation: (1) In each observation of a young child a clear distinction must be made between the outward action, really observed, i.e., the action or expression seen, the utterance heard, etc., and the conclusions deduced. (2) The conclusions should, as much as possible, be in accordance with child nature. Care must be taken not to bring into consideration the complexities of the adult psychic life. (3) No general psychological assertions, conclusions, or explanations should be made which cannot be amply justified by actual observation.

A. Gesell,(211-218) one of the American leaders in child psychology, draws attention to the danger of pseudo-objectivity which leads to ready-made generalizations, neglecting the factor of the child's individuality. According to Gesell, a child's personality centers around his unchangeable ability to grow, and a child constantly

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* P. 341.

changes his habits and abilities as he grows. Therefore, Gesell says, the child must be treated in relation to no one but himself. In order to avoid generalities Gesell draws psychological portraits, describing the growth process, in which he distinguishes four basic fields of behavior: language behavior, motor characteristics, adaptive behavior, and personal-social behavior.

The methods used in child study are, more than in other psychological approaches, determined by the philosophy of the experimenter. The empiricists emphasize the environment as the dominant influence in forming personality. The nativists stress the factor of heredity. The behaviorists observe and measure a child's overt behavior, putting into the foreground the evaluation of quantitative data.(569, 592) The psychoanalysts try to detect the underlying motivations, being mainly interested in the evaluation of qualitative differences.(196, 335) The Gestalt psychologists emphasize the frame of reference, the "whole" to which a part refers, and the dynamic relationship of manifestations.(340, 366) What appear to be two cases of the same objective behavior may prove fundamentally different when the accompanying phenomena of consciousness are taken into consideration.

The present author, presenting an approach by his experimental depth psychology,(610-615) wishes to emphasize the unity between goal and means of investigation, the goal being the depth of the child's personality and the means being the experimental method. From the viewpoint of the depth of personality as a goal, converging methods have to be designed because the "depth" of the individual child has no fixed point but can only be searched for by the cross-point of various reactions. The methods do not consist of an aimless collection and verification of data but are conceived with a view to evolving some hypotheses on the structure of the child's personality. On the other hand, an objection to the accumulation of isolated and unrelated observations is paralleled by an objection to the projection of a ready-made hypothesis upon data before their experimental verification. The experimenter should not start with any hypothesis whatsoever, but he should first explore the unknown region of the child's behavior in order to have a hypothesis suggested by the material observed, and not by the observer.

DIFFERENCES OF APPROACH IN THE NATURAL SCIENCES, PSYCHOLOGY, AND CHILD STUDY

Psychology differs from the natural sciences in several basic respects, of which we mention only a few: The material of psychology is to the greatest degree terra incognita, while the material of the natural sciences is largely already explored and interrelated, thus enabling investigators to base each new approach upon already formulated hypotheses. Laws in the natural sciences imply a probability of a happening in almost 100 per cent of the cases, while psychological laws only suggest a probability of a happening in a majority of cases. The validity of a psychological observation depends on its frame of reference, a result being significant if it happens in, say, 60 per cent of the cases when chance would allow 33 per cent, but insignificant when chance would allow 50 per cent. Reliability and validity, united with each other in the natural sciences, need not coincide in psychology where results may be valid (confirmed by various approaches) but not reliable (not showing the same result at different times and with different observers) because the subject might change through new experiences, and the personalities of different testers might alter the results. The results may be reliable but not valid if, for instance, tests do not indicate what they are supposed to explore. (The results of intelligence tests may be reliable, but actually not measure "intelligence.") Observations in the natural sciences are detached from the psychology of the observer, while psychological observations are influenced by the "human factor" of observer and observed.

To the general difference between the approaches of psychology and those of natural sciences is now added the difference between adult psychology and child psychology. In adult psychology the observer can use himself as a frame of reference in interpreting another adult. However, the greater the difference is between the person we are observing and ourselves, the greater is the difficulty in forming a correct interpretation or an adequate hypothesis.

STEPS AND TECHNIQUES OF EXPERIMENTATION

Child psychology should start with a general observation in order to familiarize the observer with the material to be observed. The methods of observation can be divided into two groups: observations based upon spontaneous behavior and those based upon reactive behavior. In the following we shall present the main steps that should be taken in experimentation.

1. General observation: Spontaneous behavior can be observed in all activities of children. The observer, unnoticed by the children and not interfering with their activities, is a silent recorder, making a survey of his field of exploration.

2. Specific observation: After the observer has familiarized him-

self with the general pattern of children's behavior, he can focus his attention upon certain selected aspects of children's activities, their habits of eating, sleeping, playing, etc.

3. Individual observation: If the observer has won an over-all picture of children's behavior, he will be able to notice individual differences.

4. Classification: The study of individual differences leads to the method of classification which may be applied to (a) boys and girls; (b) age differences; (c) social differences; (d) differences of expression in the same situation.

5. Reactive behavior: Another category of observation is the observation of reactive behavior, referring to the action of a child under a clearly defined influence from without, called a "stimulus." Observations of this type are directed to a child's reactions to stimuli of color, form, sound, taste, his power of imitation, his suggestibility, etc. The observation of reactive behavior should follow the observation of spontaneous activities, since those give a truer picture of the personality of the child, who is here not reacting under the compulsion of artificial stimuli. The interpretation of reactive behavior should take the observation of spontaneous behavior as a frame of reference.

6. Exploration: Exploratory techniques try to detect the motivation of behavior. Several approaches are used:

(a) Case history: The child's family situation, the role he plays at home, the reactions of father and mother to the child, his possible diseases and experiences are explored and traced back by investigating the child's environment.

(b) Questioning and psychoanalysis: The child's motivations, fantasies, dreams, and wishes are explored and analyzed by approaching the child directly.

(c) Projective techniques: A child's responses to pictures, stories, play, puppets, his projection of images upon ink-blots (Rorschach technique), are used to explore the child's conscious and unconscious material.

(d) Interpretation of expressive movement: A child's bodily movements and postures, his movement patterns, as projected upon his finger paintings, drawings, clay work, etc., are used as a means to explore a child's wishes, conflicts, frustrations, and emotions.

7. Standardization: The integration of all observations allows us now to sketch an average profile of the young child, according to types of behavior. With reference to all the data discussed, tests may now become useful.

8. Modification and education: The educational aim of child study is to design techniques leading to an understanding of the child, guiding the child to an adjustment to his environment, to a modification of undesirable traits, and to a full expression of his personality.

9. Child study as a contribution to adult psychology: Observations, comparing child behavior with adult behavior, open new aspects for an understanding of the dynamics of personality in the child, in the adult, and between child and adult.

10. Hypothesis: It is at the end of his investigation that the observer should interrelate all his data on children's behavior to a hypothesis on children's expressions and reactions. The hypothesis forms the framework which holds all data together and makes each isolated observation meaningful.

11. The theory: One hypothesis which explains findings in a broader context leads to new hypotheses which stimulate the designing of new experiments in order to check their validity. Many interrelated hypotheses may lead to a theory of the young child's personality.

THE GOAL OF CHILD PSYCHOLOGY

Observation, experimentation, and interpretation are the three main roads of child study. Their basic aim is to find out modes of behavior, motivations of behavior, and the probable course of behavior in the child's future development. This is important, not only in order to understand the organization of the child, but also in order to design the adult's proper attitude toward the child, that is, to find out new ways of education which may make the child and the society growing out of children happier.

Even haphazard observation of the relationships between child and adult reveals that both are living in two different worlds. This basic difference is explained in both cases as a resistance against understanding and cooperation. Parents try to break the child's resistance by punishment, and children produce, as a retaliation, aggression and emotional disturbances. Extreme cases of the child's resistance are called "negativism," the child doing just the opposite of what is desired. The resistance may persist intellectually, emotionally, socially, or even bodily, appearing in stuttering, visual defects, etc. The young child's resistant behavior may later appear in a great variety of manifestations—generally asocial behavior, intolerance, delinquency.

However, recognizing the gap between the two worlds of child and adult, we need not accept a negative attitude. On the contrary, the very fact of recognizing the difference between the personality of the young child and that of the adult assures a more accurate interpretation of the child's actions. Ignoring the gulf between the two worlds led to the greatest misinterpretations of the child's expression and activities. Understanding the child in his own terms will form the basis for a mutual understanding, reducing the predisposition to a later neurosis and the struggle between generations, since the faults of yesterday become the dangers of today.

APPROACHES TO THE PERSONALITY OF THE PRESCHOOL CHILD BY EXPERIMENTAL DEPTH PSYCHOLOGY

The material of experimental depth psychology consists of the so-called expressive movements, since an individual's personality becomes manifest in the way he expresses himself. There are three basic forms of such an expression: (1) The expression of thought; (2) the expression of action; and (3) the expression of movement. In our experiments with adults, thought processes were studied by investigating the structure of associations which could be classified into certain types. Thought processes were further investigated in relation to memory. Our thinking depends on material which is conserved by means of memory. But the functioning of memory is not like that of a recording machine, registering all items received; memory is a selective process and the selection depends on dynamic factors, such as interest and emotion. Experiments indicated that interest increases memorizing faculties and that emotions may prevent items from being consciously remembered. The expression of action was studied by behavioral observations; by taking a movie while the subject accomplished a task; and by tests in which a person has to decide which of two proposed actions he would follow. The expression of movement was investigated by comparing judgments of neutral observers with the judgment of a person about his own movements and the movements of others. All these methods were applied to adults.(615)

When experimental depth psychology next attempted to investigate the personality of the young child the three basic forms of expression mentioned had to be studied under new conditions, because young children cannot be brought under the same experimental conditions as adults. The expression of thought in young children was not only studied by the method of stimulus and reaction, but we also used the spontaneous manifestations of the children.

Such spontaneous manifestations are their verbalizations and their drawings. Comparing the records of different children, it appeared that each child has certain stereotyped ideas and a certain stereotyped way of expressing them. Such recorded stereotypes allowed us to draw a certain profile of the child's personality, demonstrating that ideas and expressions recorded on one day are not accidental, but are reflections of the child's personality. By such a comparative method we got an indication of whether a child is dominating or submissive, extravert or introvert, more reasoning or more imaginative. The comparative method also opened to us the world of the child, because the child thinks elliptically, that is, in a way which in grownups would be called flight of associations. The child leaves out certain links which would make the imagination understandable to an outsider. Such missing links can be restored by comparing different records. But we have still another way of penetrating the child's personality and of getting the missing links: by using not only verbal expression but also pictorial expression. Children's drawings are a copy not of impressions but of expressions; they are pictured associations.

Our leading concept has been that of the Unity of Personality. The child's intellectual, emotional, and social expressions appear to be interrelated with each other, and one manifestation could not be fully understood without considering the others. We therefore needed converging approaches and not isolated tests. The child's intellectual expressions have been studied by an analysis of associations expressed verbally, pictorially, and dramatically (play); by a test of imagination; and by a comparison between I.Q. and R.Q. The child's emotional expression has been investigated in its reflection upon expressive movements and by means of a security test. Family drawings have given us some indication of the child's social behavior. New methods of investigation are in the process of development; they all have as their aim the understanding of the individual child not so much with reference to other children as with reference to the child's total personality, in which each single manifestation depends on the configuration of all his trends. Hence we have to use the most different methods in observing each child, because the pattern of personality can be detected only by converging approaches. The detection of different roots in apparently similar manifestations of child and adult, and the detection of the same roots in apparently dissimilar manifestations of child and adult, is the experimental task set by a depth psychology of childhood.

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